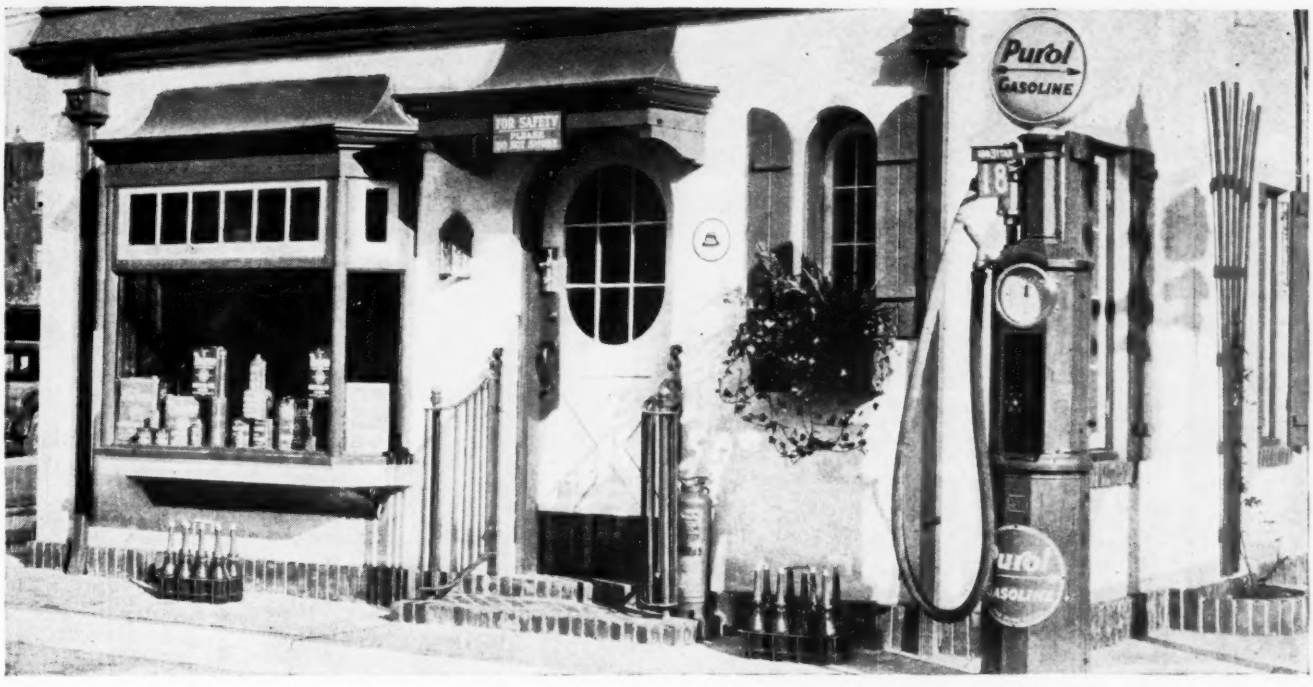


A Pure Oil Co. service station in Binghamton, N. Y., shows the new show window incorporated in the new model buildings. Here it is made attractive with a fern and used to exhibit packaged oils

Station Windows as Silent Salesmen; Expert Tells How to Dress Them

By Ward K. Halbert
N. P. N. STAFF WRITER

MERCHANDISE display windows are being talked about among oil marketers operating service stations.

The up-to-date 1928 model service station has a show window and a greasing pit or lift, two things that are comparatively new. Incidentally they go well together, because greasing is a developed science of "service while you wait". While the customer waits is the oil man's opportunity to do some constructive selling, and the show window helps.

The display window has already made its appearance in retail establishments where oil and gasoline are sold, but most of these are not filling stations of the "conventional type". They are usually found in super service stations having from three to seven departments, and such places are generally privately owned, rather than part of an oil jobber's chain of controlled outlets. With several lines of merchandise, the need of a window is more obvious.

Owners of individual service stations often come into the oil marketing business from some other line of merchandising. Some oil men say they have brought their show window ideas with them from the grocery business, or the shoe business, or whatever it was. Whether that is the right guess or not, the oil marketing business has the show window and time will tell how it is going to be developed. Just now they are not being dressed very well. Several good companies are giving thought to it, so filling station window displays are undoubtedly in the immediate offing.

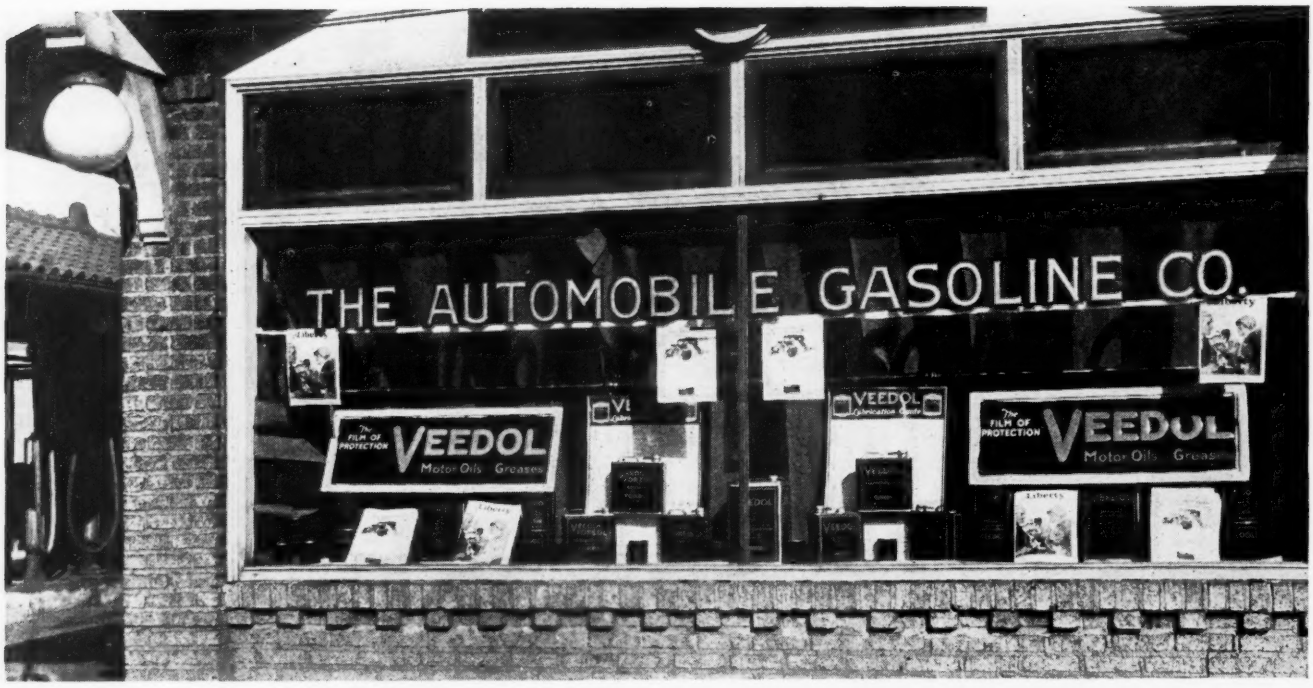
Probably the farthest step in that direction was taken about a year ago by the Pure Oil Co., when they embodied a show window in their new type of standardized service station. An accompanying picture shows one of these windows better than it could be described.

ALL Pure Oil windows are not the same size but, however big the station is, the window occupies nearly one-third of its front, sticks out approximately 18 inches over the drive.

Another accompanying picture shows a display window in a station of the Automobile Gasoline Co., St. Louis. This company is a Veedol distributor, and the window was dressed by a Tide Water Oil Co. representative. It is simple and attractive, made up with material at hand; cans of Veedol oil and grease, window cards, lubrication guides and the company's advertisement that appeared that week in Liberty magazine.

ALTHOUGH this window lacks the compelling view of a projected display, possible in windows of the Pure Oil Co. type, it has the debatable advantage of being on the side of the station instead of in front. Undoubtedly fewer people will see it than if it were near the gasoline pumps. Yet those who see it will view it longer, for it is next to the drain pit. The man waiting for his car to be oiled is "oil minded" and open to think about lubrication, or possibly other servicing of his car.

"Oil is the most prosaic commodity on earth", an oil man said recently. "Certainly there is nothing in the sight of any petroleum product to stimulate any of the senses nor to create a desire for possession. Who would look at a gallon of gasoline or a quart of oil and say 'Gee, I'd like to have that?' It does not happen.



Window in a station of the Automobile Gasoline Co. of St. Louis. Cans of a nationally advertised motor oil, lubrication charts, two cardboard posters and an "ad" in a national fiction magazine make an attractive window display

Oil and gasoline are necessities to power and luxury of his automobile. Nothing more."

"To the average motorist, gasoline and oil classify with coal and ice—a d— nuisance, but necessary", one oil sales executive said recently. "But educational window displays would go a long way toward overcoming that attitude of mind. Automobile accessory stores have pleasing window displays. Tires are little if any more attractive than oil. The conquest of petroleum against the arch demons, Heat and Friction, is a romantic topic.

"The reason accessory stores have better window displays than filling stations is because accessory stores often are standardized store rooms with show windows in front. Accessory manufacturers design window displays and supply them with their merchandise to their dealers. Oil companies have not done this for three main reasons, (1) they have been able to sell their goods without it, (2) the subject matter was hard to develop, and (3) the usual filling station has had no suitable window."

BUT these conditions are changing. The display window is gradually breaking into the oil business. In fact the demand for displays for windows already exceeds the supply. Three marketers of nationally advertised motor oils say they have been literally besieged of late with letters from small dealers, asking for window display material. Vacuum Oil Co. men say they evolved their metal display case for package goods to stand on filling station pump islands partly because the average filling station lacked suitable window space and the need was so obvious.

Hoping to get some advice on how to dress windows of service stations and garages, one man recently called in a professional window dresser with several years of experience in department store work. He discussed the nature of the merchandise and the character of the windows and got a report from the professional that was altogether encouraging. Some of the high points in the report follow:

"A show window, once it is built, is a care and a responsibility, as well as an opportunity. A poorly kept window is much worse than a blank wall. What could reflect more discredit on a place of business than a dusty, neglected show window containing a few items of soiled merchandise, dead flies, a card announcing a local talent play at the 'Opry House' shown a month ago, and the stump of a half-smoked cigar balanced on the edge of the railing?

"Standardized window exhibits have a great deal of merit in overcoming the conditions just described. They are colorful and thus usually have the quality of getting attention. But, ordinarily, cardboard window displays that come in a box to be unfolded and set up by the porter or delivery boy serve mostly as an apology for having nothing in the window. If allowed to get faded and soiled they have doubtful merit."

The foregoing discussion had reference to use by an oil man of cardboard cut-outs to improve the appearance of windows in his dealers' places, which might be garages or tire and accessory stores. Standardized window exhibits for service stations are patently useless, for lack of a standardized window. Nevertheless, the Standard Oil Co. of Indiana has used standardized exhibits very effectively in Chicago for five or six months.

It has been several years since the Indiana company incorporated the large rectangular window in the front of their stations. Behind each is a small platform upon which case goods may be exhibited. These windows never attracted so much attention as last winter when standardized paper "high lights" began to be used to draw attention to case goods.

JUST now the Standard stations in Chicago are showing three quart bottles of oil. The bottles are the regular fruit-jar type with metal nozzle for dispensing, but they are shined and clean. One bottle contains fresh Polarine motor oil and the other two contain black crank case drainings. The Polarine is in the middle and shows off well in contrast.

Such a display on the hardwood floor of an undecorated window would not attract much attention. But the windows are all dressed. The most attractive feature is a large semi-circular, red, paper fan that forms a background for the oil exhibit. With an ordinary electric lamp above it, this fan draws attention of motorists to the bottles, whether they come into the station or not.

Some time ago the red fan served as a background for a five-gallon can of iso-vis, which is black. It showed off the black object in sharp contrast; but was no more attractive a window than the stations had one time previously when small white packages of merchandise were set before the fan.

But, quoting again from the win-

This is the other side of the picture, what many people have in mind when they speak of oil stations as objectionable in any neighborhood. The window exhibit consists of a torn shade, an ice cream "ad" and a few paint brushes and bottles

dow dresser, "If a merchant only shows the merchandise he has for sale, he is not getting the full benefit from his windows. The show window should proclaim to the passing public that the establishment is owned and operated by live progressive business people. The attractiveness of windows should get a great deal of **priceless word-of-mouth advertising** for the merchant.

"A few months ago one of Chicago's big department stores exhibited a fur-lined bath robe in one **of its best windows. It was for sale,** but the management never hoped to sell it. But they achieved what they wanted. They made the public talk. They left the impression that a store with a bath robe like that would surely have all the other kinds of bath robes.

"This idea should be good in an oil station. Showing some unusual product of petroleum should leave the impression that the oil man has a good source of supply, with great resources and plenty of technical skill.

"EXHIBITS showing processes 'from start to finish' of any product are always interesting. People crowd around an industrial exhibit to see how rubber tires are made or rag rugs or electric lamps. The picture of a refinery or a model of a refinery should be a good exhibit for a filling station window.

"Oil field views and oil well machinery in miniature open a wide possibility for popular interest, as well as some attractive scenery. In this connection, moving objects in show windows are not always in bad taste. Some window dressers object to that means of getting attention, but there is no law against it if it gets results.

"A flowing stream of oil from a can into a motor is easily effected in a window display. I have seen open gear boxes in windows, showing the gears working in the gear compound, and it was interesting. Though not a mechanic, it led me to read the accompanying window card to learn about the product.

"Exhibits of this character are expensive, but they would not have to be changed often. A prospective customer should be shown a good window more than once. All kinds of windows should be kept clean and orderly, by all means. This does not mean change them every day, though. A change every two weeks is often enough, and one change a month in many cases.

"The oldest and latest models of goods, in comparison, are good ideas in window dressing. A men's store shows hat styles of 50 or 100 years ago in contrast with today's models. Sometimes they make an Arizona 'cow puncher' hat or a Turkish fez the central figure in the window. Old lubricating systems against new, or pictures of old automobiles in contrast with new, will create interest among patrons of the station.

"There are only a few rules that need to be followed by a person of good sense to insure him reasonable success in window dressing.

"First, people usually look down rather than up, so the floor of the window should be covered neatly.

"Objects hanging in a window are not so attractive as those that rest on something.

"A little taste about colors helps in showing off merchandise. A drab object should have a bright background, and a bright object a dull one. It is not likely that an amateur window dresser will turn out a work of art, but that is not always necessary to a successful window.

"MAKE the thing to be shown the central object; use color to get attention; drape over the unsightly parts of the window, if there are any, and light it so it can be examined from the outside.

"There is a practice among merchants in some lines of business which I think the oil industry might use well. That is the exchange of windows. Let the local department store use the filling station window and, in return, exhibit your oil in one of their windows. In this way you get the services of an experienced window dresser.

"Suppose a department store in the city had a handsome automobile robe to sell. Probably not enough motorists would see it quickly in the department store window. It could be shown in the window of two or three well chosen service stations, and a great many motorists might see it in a day. The store management could take care of having the windows dressed, including some of the oil man's merchandise in the set-up. Or the store could show the oil man's goods at the down-town store. This is a fairly common practice in medium sized towns."

Complete 4000-Barrel Well On Louisiana Salt Dome

By Telegraph

HOUSTON, March, 12.—First offside production on the Bayou Bouillon salt dome in St. Martin's parish, La., was found by the Rycade Oil Corp. when it completed a 4,000-barrel well on the north flank of the dome. Depth was about 3050 feet. Acreage is mainly controlled in large leaseholds by the Rycade and Gulf companies.

At Whitecastle, Iberville parish, Roxana Petroleum Corp, got a showing of coastal heavy crude at shallow caprock levels and is believed on the verge of completing a discovery well. The Whitecastle prospect is within about 20 miles of the Sorrento domes where the Gulf Refining Co. of Louisiana recently completed a discovery well for more than 5,000 barrels daily inside a solidly controlled block east of the Mississippi River. Major operators also control Whitecastle through large leaseholds that will prevent any great competitive drilling.

Florida Newspaper Hits 5-Cent Gas Tax

TAMPA, Fla., March 9.—A stand against a "50 per cent tax rate" in Florida is taken editorially by the Tampa Morning Tribune in its issue of March 2, in which it attacks the 5 cent per gallon tax as too high on gasoline costing 16 cents (at the time the editorial was published) at Tampa stations.

The editorial says, in part:

"Gasoline consumers are paying 5 cents tax on an article costing 11 cents—or almost 50 per cent tax. This, we are sure, is the highest tax ever paid on any commodity or on anything else in this country. No tax levied for World War purposes reached that figure and no tax levied on liquor or the liquor business in the palmy days before prohibition assumed such proportions. The Boston Tea Party was provoked by a much smaller tax rate."

The automobile registration fee is also hit in the editorial.

SAN FRANCISCO, March 10.—The San Francisco office of the Bureau of Mines has been designated by the Superintendent of Documents as the Pacific Coast distributing center for all Bureau of Mines publications, whether for free distribution or for sale. Persons desiring these publications should address the U. S. Bureau of Mines, 506 Custom House, San Francisco.

HARRY H. ROGERS
New president exchange National Bank, Tulsa

Elect McGraw's Successor As Tulsa Bank Head

TULSA, March 10.—Harry H. Rogers of San Antonio, well known oil operator in the Mid-Continent field for many years, has been elected president of the Exchange National Bank of Tulsa. He succeeds J. J. McGraw who died at Hot Springs, Ark., on March 3.

Mr. Rogers was associated with R. M. McFarlin and J. A. Chapman in the McMan Oil Co. prior to the time that the company sold most of its properties to the Magnolia Petroleum Co. He has been attorney for the company since the sale and has been a producer on his own account in addition.

In 1920 Mr. Rogers moved from Tulsa to San Antonio on account of the health of his wife, who has since recovered. He retained his place on the board of the Exchange bank and has been president of the Exchange Trust Co. for four years.

More on Oil Well Pumping

MARCH 21 issue will contain the second article on application of power to oil well pumping in the series written exclusively for NATIONAL PETROLEUM NEWS by L. C. Uren, head of the petroleum engineering department of University of California.

The first article appeared March 7.

The second article will take up transmission of power through belt-driven band wheels; reversing gear; single reduction gear pumping units; double reduction gear pumping units, and other phases of this subject.

Refund of All Illinois Gas Tax Possible

CHICAGO, March 10.—Since Attorney General Oscar Carlstrom of Illinois issued an opinion about the disposition that might be made of the money which the state holds, having collected a 2-cent gasoline tax for nearly seven months under an illegal act, a great deal of activity has been started among the Independents of the state looking toward recovery of their tax money.

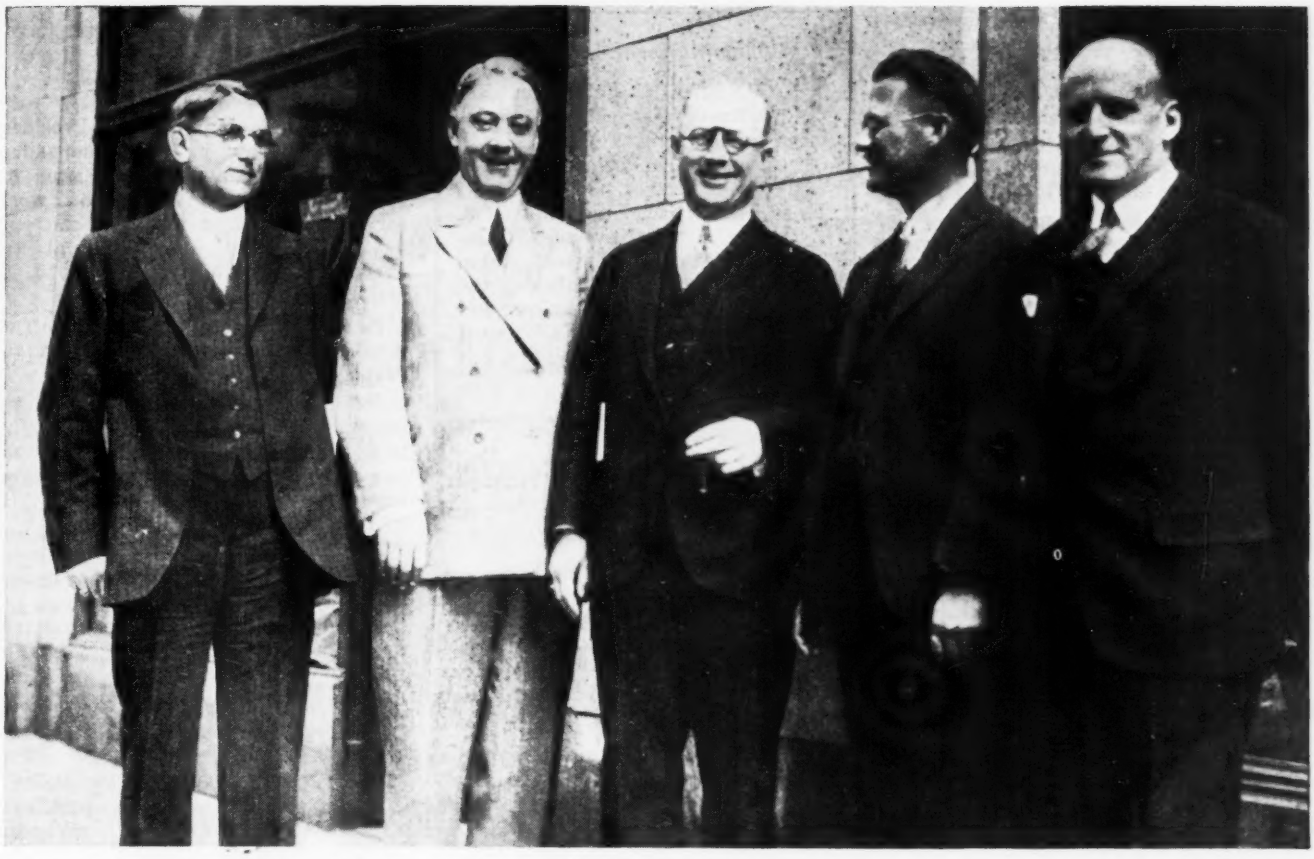
Benjamin Wham, a Chicago attorney who has devoted considerable time to the interests of oil clients, says there appears to be more hope for the recovery of the whole amount of the tax than the opinion of the attorney general allows All authorities seem to agree that taxes on gasoline sold between Feb. 1 and 24 do not belong to the state and if paid must be returned. The attorney general's opinion divided the tax into three divisions:

First, that paid or collected by distributors after the statute was held unconstitutional on Feb. 24. The distributor is entitled to keep this and do as he pleases with it. If he has already sent it in the state must return it. Standard Oil Co. of Indiana has already gone on record with a proposal to repay it to their customers whose purchases are of record.

Second, taxes paid under protest. Such taxes must be held by the department of finance for 30 days. In order to get this refunded the distributors must get an injunction restraining the deposit of this money in the state treasury before the end of 30 days. This technicality allows until March 20 to recover taxes paid under protest in January. But taxes paid in 1927 are already in the state treasury.

Third, taxes paid without formal protest. According to the attorney general's opinion this money belongs to the state and can be disposed of when the next legislature appropriates it to the purpose for which the recently voided law assessed it. But Mr. Wham says there has been a ruling of the Illinois Court of Claims more favorable than that.

He says the Court of Claims in considering a corporation's franchise taxes, paid under the provisions of an unconstitutional statute, ruled that written protest was not necessary to recovery and that involuntary payment could be shown by circumstances. This, he believes, gives hope for the ultimate recovery by the oil companies of all the money.



Officers of the Western Petroleum Refiners' Association who will direct its activities for the ensuing year. The election was March 6 at Kansas City, at the annual meeting of the association. Left to right—first vice president, E. W. Goebel, general manager of the Manhattan Oil Co., Kansas City; second vice president, George D. Locke, vice president of Barnsdall Refineries, Inc., Chicago; president Roy B. Jones, president of the Panhandle Producing & Refining Co., Wichita Falls, Tex.; Howard Bennette, managing director, Tulsa, and Fayette B. Dow, counsel, Washington. M. J. Grogan, vice president of the Louisiana Oil Refining Corp., Shreveport, who was elected third vice president, was unable to attend the meeting, and does not appear in the picture.

Western Refiners Consider Research

By J. C. Chatfield
N. P. N. STAFF WRITER

TULSA, March 10

A CO-OPERATIVE research campaign may be undertaken by the Western Petroleum Refiners Association in the near future. As a result of discussions at the annual meeting of the association held at Kansas City on March 6 a proposal for financing the program is being sent to all members by Howard Bennette, managing director.

Although the proposed research work will not be limited to any one line of investigation it is probable that study of motor fuels will be the most important feature. Discussion at the Kansas City convention indicated that the anti-knock characteristics of gasolines and methods of treating are subjects which the association may ask the chemical engineers to study first.

Dr. Roy Cross of the Kansas City Testing Laboratory, in a discussion of anti-knock properties of gasolines suggested to the refiners that the field of straight run gasoline, the largest source of motor fuel, is a highly important field for study. He illustrated the lack of information by a recent instance of a controversy which arose between a refiner and jobber.

A refinery running on a crude which produces a very good grade of anti-knock gasoline was selling to a jobber who advertised the anti-knock characteristics of the product after having it tested in the laboratory. Without warning the gasoline shipped to the jobber began to show little or no anti-knock value.

The refiner asserted to his customer that he was running on the same crude in the same manner and that the gasoline should be the same. Investigation developed that the refiner had installed some new towers at the plant from which he was taking a certain narrow cut for other purposes. This narrow cut was found to contain virtually all of the anti-knock value in the gasoline fraction of the crude.

The addition of certain substances to crude during refining to produce anti-knock characteristics in the gasoline was suggested by Dr. Cross in his address. He mentioned that one refiner has found it possible to improve his gasoline by introducing lime into his stills.

Dr. Cross mentioned also the fact that profitable study might be made of cracking methods, the production of alcohols and the manufacturing of by-products from sludge oils and coke.

Dr. H. P. Cady of the University of Kansas, brought out the fact that a study of the fundamentals of gasoline treating would be of untold benefit to the refining industry. He said that almost every new crude brought in presents a new treating problem which must be solved, usually by the trial and error method.

His suggestion was that it should be possible by research to gain sufficient knowledge so that the treatment of gasoline from any new crude might be undertaken without hesitation after an examination of the characteristics of the crude.

THE entire afternoon session of the refiners' annual meeting was given over to a study of the research plan. Dr. F. C. Whitmore, chairman of the division of chemistry and chemical technology of the National Research Council and head of the chemistry de-

partment of Northwestern University, addressed the refiners on the benefits of research, telling of some results obtained by the meat packers on a co-operative study of meat curing and warning the refiners to get good men, give them a problem and then give them plenty of time to solve it.

At the meeting of the board of directors after the general session Howard Bennette was re-elected managing director of the association for another year and M. E. Griffith of the Tulsa headquarters was made treasurer.

The executive committee of the association was selected, including the newly elected officers and F. W. Burford of the Crystal Oil Refining Corp., Shreveport, to represent the Louisiana and Arkansas group; John L. Gray, vice president and general manager of the Shaffer Oil & Refining Co., Tulsa, to represent Oklahoma; Edgar J. Marston, president of the Texas Pacific Coal & Oil Co., Fort Worth, to represent the Texas group; C. L. Henderson, vice president of the Vickers Petroleum Co., Wichita, to represent the Kansas group; and L. R. Crawford, vice president of the Producers and Refiners Corp., Independence, to represent the group with plants outside of the Mid-Continent proper.

In his annual report Fayette B. Dow, Washington counsel, suggested that it may be necessary for the oil industry to form a quasi-public corporation to co-ordinate radio communication of oil companies and radio use in oil finding. He said that the government has made big demands on available wave lengths and that news agencies likewise are demanding so much that apparently very little of the available spectrum will be left for company use.

Mr. Dow said that the recent report of the Committee of Nine, which was reviewed by some of the nation's ablest lawyers before publication, is of the utmost importance to the industry in its decision that co-operative agreements for pool oil development are not in violation of the law even though production may be curtailed as a result. Mr. Dow said that this was a clear invitation of the government for the industry to put its economic house in order.

TULSA, March 10.—Harry Schoonover, formerly production superintendent for Snowden & McSweeney, Inc., has resigned his position with that company to become superintendent of production for the Pure Oil Co. He succeeds the late J. H. Greer.

Mr. Schoonover started his oil career working for Snowden & McSweeney in the Illinois fields 20 years ago. He has been with them ever since. He will make Tulsa his headquarters, arriving here April 1.

Refiners Honor McGraw

WESTERN Petroleum Refiners Association, at its meeting in Kansas City, March 6, extended condolences to the family of James J. McGraw, Tulsa banker, who died March 3.

"James J. McGraw was Oklahoma's outstanding business man, Tulsa's most useful citizen, the Southwest's greatest banker and the refining industry's wisest counselor", reads a portion of the resolution.

Refinery Heads Shifted in Standard of California

HOUSTON, March 8.—With the creation of the Pasotex Petroleum Co., and the start of construction work on a plant at El Paso, the Standard Oil Co. of California, San Francisco, announced a number of refinery department changes.

W. G. Hamilton, formerly superintendent of the Richmond, Cal., refinery, was appointed manager of the El Paso plant. R. G. Follis, recently assistant superintendent of the Bakersfield, Cal., plant, was made Pasotex superintendent. F. H. Smith, formerly assistant superintendent of El Segundo, Cal., refinery, was promoted to superintendent at Richmond.

C. E. Finney was made assistant superintendent at Richmond. J. L. Hanna, formerly Bakersfield superintendent, has been appointed chairman of the Richmond standardization committee. A. C. Moorhead, formerly Richmond assistant superintendent, was transferred to a similar post at El Segundo. J. F. Faber became superintendent of the Bakersfield refinery.

Red Hat in Spotlight At I.O.M.A. Meet

CHICAGO, March 10.—President L. V. Nicholas, of the Independent Oil Men of America, will sing his swan song in oil association work, for the present at least, at the convention of that association at the Stevens Hotel Chicago March 19, 20 and 21.

He will talk of "Building Constructively" at the afternoon session the first day.

The new president is down on the program at the last session for a talk on "Looking Ahead". Who the new president will be was not known when the program was prepared. He will be elected at this meeting.

Following the address of welcome by E. H. Hilpp, Kentucky Consumers Oil Co., chairman of the board of directors, R. A. Overholser, assistant to Mr. Nicholas, will speak on "'The Spread Eagle'—Past Present and Future". Other speakers will be:

C. Y. Hinchey, director of advertising for the association, on "Full Identification—Modern Black Magic";

C. L. Henderson, vice president, Vickers Petroleum Co., Wichita, Kans., "Advantage of Pulling Together";

J. C. Nourse, president Nourse Oil Co., Kansas City, Mo. on "Profit from Teamwork with our National Brand of Red Hat Motor Oil";

E. E. Jensen, association manager of Red Hat Motor Oil department on "What I Find";

J. S. Hoagland, manager refinery sales department of the association, "Refinery Sales Department and Why";

The morning of the second day will be taken up with the announcement of the new organization set-up by the new president, followed by short talks by the new members of the board of trustees and a number of directors.

Index to Coming Meetings

Independent Oil Men of America, annual election, Stevens Hotel, Chicago, March 19, 20, 21.

American Association of Petroleum Geologists, business and technical sessions in San Francisco, March 21, 22, 23; field trips and entertainments, Los Angeles, March 24, 25.

American Oil Burner Association, Hotel Stevens, Chicago, April 3, 4, 5, 1928.

American Chemical Society, St. Louis, Mo., Apr. 16, 17, 18, 19.

Nebraska Independent Oil Men's Association, Hotel Kearney, Kearney, Neb., Apr. 18, 19.

National Petroleum Association, Cambridge Springs, Pa., April 19, 20.

Kansas Oil Men's Association, Hotel Lassen, Wichita, Kan., Apr. 26, 27.

Natural Gasoline Department of American Gas Association, Texas Fair Grounds, Dallas, May 7, 8, 9, 10.

National Oil Scouts of America, Amarillo, Tex., May 21, 22.

Natural Gasoline Association of America, Hotel Mayo, Tulsa, May 22, 23, 24.

Vapor Phase Blending at Gasoline Plant Produces Finished Motor Fuel

By J. C. Chatfield
N. P. N. STAFF WRITER

TULSA, March 8

A HIGH pressure method of blending in vapor phase has been developed at the Dilworth gasoline plant of the L. H. Wentz interests.

As a result the company has ceased producing natural gasoline for sale as such from that plant. It is producing a finished motor fuel which is being marketed direct to the jobbing trade.

In taking this step the Wentz interests are following a trend which has been gathering some momentum during the past year. A few years ago a great deal of blending was done at natural gasoline plants. Manufacturers purchased naphtha from refineries throughout the field and sold a variety of blended motor fuels to distributors.

The production of blends at natural gasoline plants dropped off to a low figure a few years ago when refiners found that the product they had been selling as blending naphtha was almost as valuable as U. S. Motor gasoline. Before 1922 it was often possible to buy 48-52, 450 end point naphtha, at 1 to 3 cents per gallon below the then 58-60 Navy gasoline.

Since that time the differential has not exceeded 0.5 per cent gallon most of the time and often has been less.

With freight from refinery to gasoline plant to be paid and naphtha selling at about the level of U. S. Motor, it has been unprofitable generally to blend. Much of the time natural gasoline could be sold unblended to refiners at about the U. S. Motor price as an additional reason for abandoning blending operations.

Overproduction of natural gasoline with a consequent reduction in price to a level below that of U. S. Motor during the past year and a half has been one factor in bringing back blending. Another has been the findings of the reasearch department of the Natural Gasoline Association of America.

After extensive experiments Dr. G. G. Brown of the University of Michigan, announced that an excellent motor fuel could be produced by blending as much as 50 per cent natural gasoline with the refinery product. He showed the anti-knock qualities of natural gasoline and talked of engine performance being regulated largely by the partial volatility of a motor fuel.

Blending Again Becomes Practical

BLENDING of natural gasoline with heavy naphtha to make a more or less stable product was one of the earliest ways of handling the problem of turning "casinghead" gasoline into a useful product. Market conditions in late years have largely made the practice impossible and the improvement in processes of stabilizing have made blending with a heavier liquid to keep down losses less necessary.

Now, however, at least in this gasoline plant which is advantageously close to a refinery, blending the product of the plant with naphtha to make a finished motor fuel is being practiced profitably. The method used at this plant is interesting, although if memory serves, it was used before to some extent in the early days of the industry.

O. H. SCHOENWALD, manager of the gasoline department for the Wentz interests, began a year or more ago to experiment with blends containing a high percentage of natural gasoline. Extensive road tests were made under conditions which would tend to cause carburetor gas lock. As a result of these tests the company is now selling around 60 cars of blended gasoline per month to jobbers in the northern states.

The finished gasoline shipped from Dilworth is a 60-62 gravity product with an initial boiling point of 90 degrees F. and an end point of 425 to 430 degrees F. At 190 degrees F. 20 per cent is distilled over and at 280 to 290 degrees F. 50 per cent is over. The recovery is 95 to 97 per cent vapor tension tests show a pressure of five to six pounds.

Recently the gasoline was tested in one of the important eastern laboratories. Results of this test showed the gasoline to have an anti-knock value equal to a mixture of 25 per cent benzol with straight run gasoline. The effective volatility was reported to be high enough for easy starting at low temperatures. The dew point was said to be high enough to avoid losses even in hot motors with heat on the manifold.

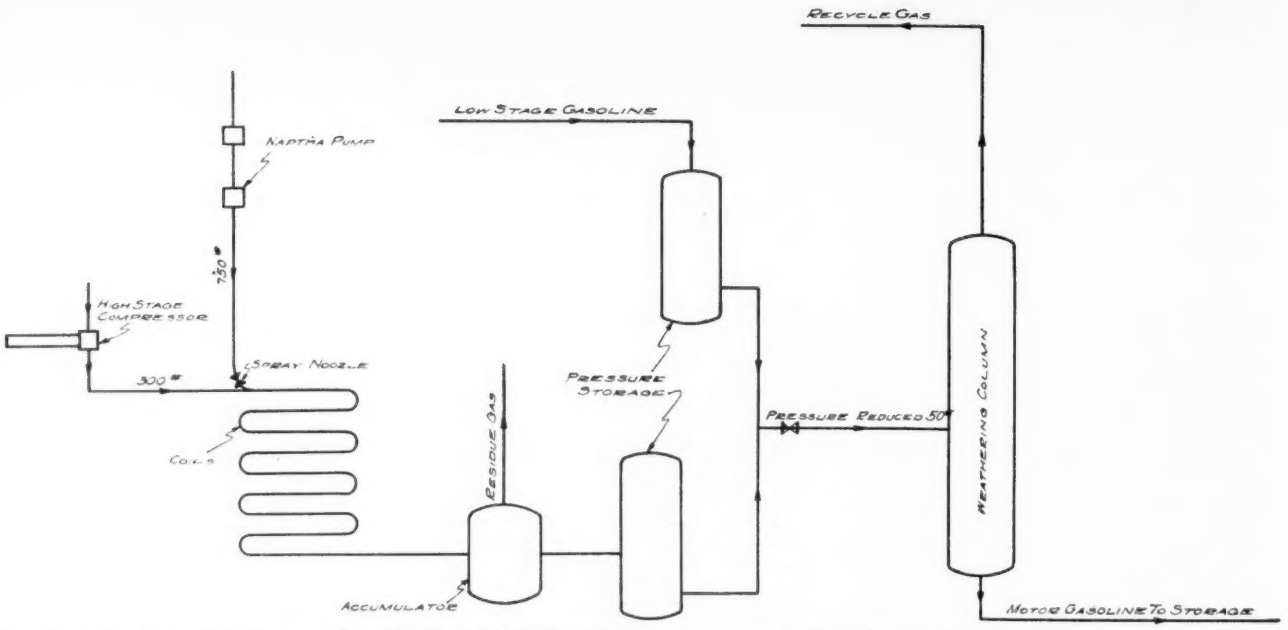
The Dilworth gasoline plant makes a Grade A product as a total plant make. The gravity ranges from 72 to 76 degrees A.P.I. and meets doctor and corrosion tests without treatment. With this gasoline is blended a 53 A.P.I. gravity cracked naphtha with an initial boiling point of 120 to 125 degrees F. and a 435 end point.

In addition to the motor gasoline described above, the Wentz organization has been producing a special aviation motor fuel. The work on this fuel was begun some six years ago under the direction of Mr. Schoenwald as a result of the inquiry of a commercial aviator known as Sandy Sanders, who was the first buyer of Wentz natural gasoline for use in an airplane.

As early as six years ago Sanders reported that he preferred the natural gasoline for use in his plane because of its high volatility and lighter weight which made maneuvering easier and permitted carrying a heavier pay load.

The Wentz interests are fortunate in being able to get blending material from a refinery at Blackwell, only 8 miles from the gasoline plant. A special rate to the gasoline plant keeps down costs of bringing in the naphtha to $25 per car, a figure which ordinarily cannot be duplicated, due to the greater distance of most gasoline plants from refineries.

TO PRODUCE a homogeneous motor fuel which will not separate out in storage, Mr. Schoenwald has designed an interesting method of blending in the vapor phase under pressure. As added insurance against the inclusion of dissolved gases in the motor fuel the product is carefully



Flow chart showing method of vapor phase blending of cracked naphtha as practiced at the Dilworth plant of the L. H. Wentz oil division

weathered in a closed column before shipment.

The blending naphtha is pumped to the blending coils by a triplex pump of the type used in creameries. The pump delivers the naphtha at the rate of about five gallons per minute under a pressure of 750 pounds per square inch.

At the point where gas from the high stage compressors enters the coil pit for cooling, a Y has been inserted in the 3 inch gas line. The naphtha enters through this Y which is equipped with an adjustable spray nozzle. Since the high stage vapor is under 300 pounds pressure the naphtha expands into the line as a finely divided mist with the aid of the 750 pound pressure and the spray nozzle.

The mixture of naphtha mist and high stage vapor goes into the coil header and through the cooling coils where the high stage gasoline and cracked naphtha are condensed together. The liquid is collected in a conventional accumulator tank and stored under full working pressure in a series of tanks pending the weathering operation.

The low stage make of the plant is stored in similar pressure tanks. This low stage gasoline has not come in contact with the blending naphtha up to that point.

Pressure on both low and high stage gasoline tanks is released to 50 pounds at the outlet and the two gasolines pass together into a weathering column where they are mixed. In the weathering column any uncondensed gases from the top of the column are recycled through the plant with the raw casinghead gas. Finished motor gasoline is withdrawn from the base of the column for shipment.

By conserving operating pressures beyond the accumulator tank the plant operators have found it possible to eliminate one or more pumping operations.

Consider Plans to Restrict Winkler County Production

By Paul Wagner
N. P. N. STAFF WRITER

AUSTIN, Texas, March 11

WITH the prorating of market and transportation outlet decided on for the Winkler county area the enigma of the west Texas situation has resolved itself into ways and means of accomplishment.

Just as quickly as a committee to be appointed by the Railroad Commission of Texas can confer with Hendricks field operators and reach a basis for report it is the plan to appoint an umpire for the Winkler county district. The railroad commission, which administers the state's conservation laws through an oil and gas division, will issue an order for equitable division of production and markets.

Decision for action along lines similar to the Seminole and Yates field pro-rating agreements was reached by a group of operators, called together by the railroad commission at Austin, March 10. Not a dissenting vote was registered on the aforementioned major problem, although the all-day session was frequently enlivened by clashes involving other issues.

The problem now is the complex one of developing a workable plan for orderly production and marketing of crude from the single west Texas field that currently threatens direct influence on the general situation. Other west Texas fields, though admittedly capable of yielding vast surpluses of crude if unrestrained, are not figuring directly in the present congestion; because it is only in Winkler county that pell-mell operations have exceeded the bounds of the industry's ability to retard development, at least for the present.

It will be necessary for owners of short pipelines from the field to tank car loading racks on the Texas & Pacific railroad to work with major interests in successfully prorating production and outlet to conform with whatever detailed plan may be worked out.

Until now, with one exception, all crude moved out of Hendricks field has been through such short pipelines and considerable quantities of oil have been sold on long time contracts to a half dozen large buyers by the tank car shipping interests.

The one exception mentioned concerns the roundly 17,000 barrels daily handled by Atlantic Oil Producing Co., through a 71-mile line to Midland, where deliveries are made under reciprocal agreement to Magnolia Petroleum Co.'s west Texas trunk system. Shell Pipeline Corp.'s gathering system has been completed from Hendricks field to the McCamey district, where it will tie-in with the McCamey-to-Healdton trunk, when the last mentioned line is completed about Aug. 1. The Gulf and Humble companies are building 8-inch links in their pipeline systems that soon will tie-in the Hendricks field with their other facilities.

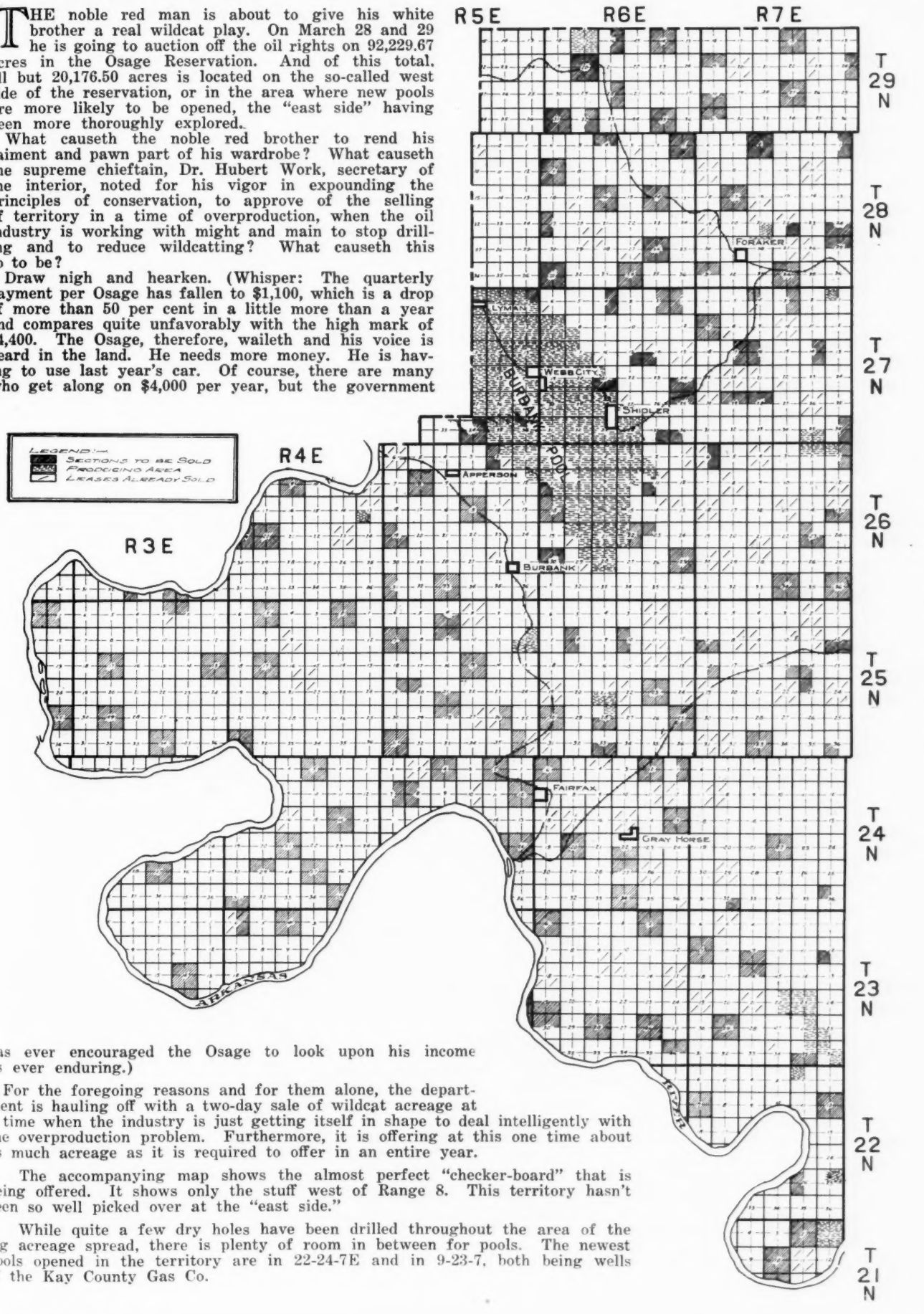
Adjustment of these outlets and the markets they provide will constitute the problem to be solved by a committee of seven, headed by the railroad commission's chief oil and gas supervisor.

Map Showing Location of Osage Tracts for Sale

THE noble red man is about to give his white brother a real wildcat play. On March 28 and 29 he is going to auction off the oil rights on 92,229.67 acres in the Osage Reservation. And of this total, all but 20,176.50 acres is located on the so-called west side of the reservation, or in the area where new pools are more likely to be opened, the "east side" having been more thoroughly explored.

What causeth the noble red brother to rend his raiment and pawn part of his wardrobe? What causeth the supreme chieftain, Dr. Hubert Work, secretary of the interior, noted for his vigor in expounding the principles of conservation, to approve of the selling of territory in a time of overproduction, when the oil industry is working with might and main to stop drilling and to reduce wildcatting? What causeth this so to be?

Draw nigh and hearken. (Whisper: The quarterly payment per Osage has fallen to $1,100, which is a drop of more than 50 per cent in a little more than a year and compares quite unfavorably with the high mark of $4,400. The Osage, therefore, waileth and his voice is heard in the land. He needs more money. He is having to use last year's car. Of course, there are many who get along on $4,000 per year, but the government has ever encouraged the Osage to look upon his income as ever enduring.)



For the foregoing reasons and for them alone, the department is hauling off with a two-day sale of wildcat acreage at a time when the industry is just getting itself in shape to deal intelligently with the overproduction problem. Furthermore, it is offering at this one time about as much acreage as it is required to offer in an entire year.

The accompanying map shows the almost perfect "checker-board" that is being offered. It shows only the stuff west of Range 8. This territory hasn't been so well picked over at the "east side."

While quite a few dry holes have been drilled throughout the area of the big acreage spread, there is plenty of room in between for pools. The newest pools opened in the territory are in 22-24-7E and in 9-23-7, both being wells of the Kay County Gas Co.

Bigger Profits for the Refiners in 1928

This series of stories will tell what some of them are doing to meet changing market conditions.

by Paul Truesdell, N. P. N. Staff Writer

Article 1

THIS year 1928 is going to show who's who in the refining industry.

It is going to be a hard year but hardship always has meant to the oil man a challenge, never a signal for surrender. Necessity furnishes a keen spur to greater efficiency in operating refineries and marketing products. So I think the refining industry has no need to worry.

After a trip through the southwest to the Gulf coast and other visits to the east and to the refining district around Chicago, after talking to refinery men in their offices, in their plants and at meetings, it seems to me that the American refining industry is faced with five major problems.

Some of these problems are not new. Some of them have been with the refiners so long they seem like old acquaintances but they are assuming a more stark reality this year, perhaps, than ever before, because of excessive competition in selling gasoline and other products.

The solution of some of these problems is going to call for the spending of millions of dollars in marketing and refining equipment, in construction of plants, in research and experimentation.

But if there is one thing that cannot be said truthfully of the oil industry it is that the industry is pinchpenny.

It can and has time and again thrown millions of dollars into the hopper to save investments and tide things over. It is ready to do so again this year and it will have to do so.

There is no reason to think that the sound, conservative companies that are awake to the signs of the times, that are ably managed and that are willing to spend the money necessary will not come through 1928 in better shape than they came through the preceding year.

There is every reason to think that they will.

The tabulation of five problems does not include the more obvious ones. One of the easiest and most apparent ways of cutting costs is to reduce gasoline loss in uncondensed refinery gas, in stored gasoline and in light crude in storage tanks. Much has been done along this line during the past few years by installation of gas recovery plants in refineries, in building gas tight tanks with breather vents and in building tanks with strong roofs capable of standing considerable pressure, thus reducing the breathing time.

There is still a lot of crude tankage which is not gas tight and from which the loss through the evaporation of light ends is considerable every year. There are still refineries without gasoline recovery plants.

The major problems that beset the refiners in the order of their importance seem to be:

1—Transportation.
2—Manufacturing costs.
3—Keeping up with new processes.
4—Labor difficulties.
5—Crude supply.

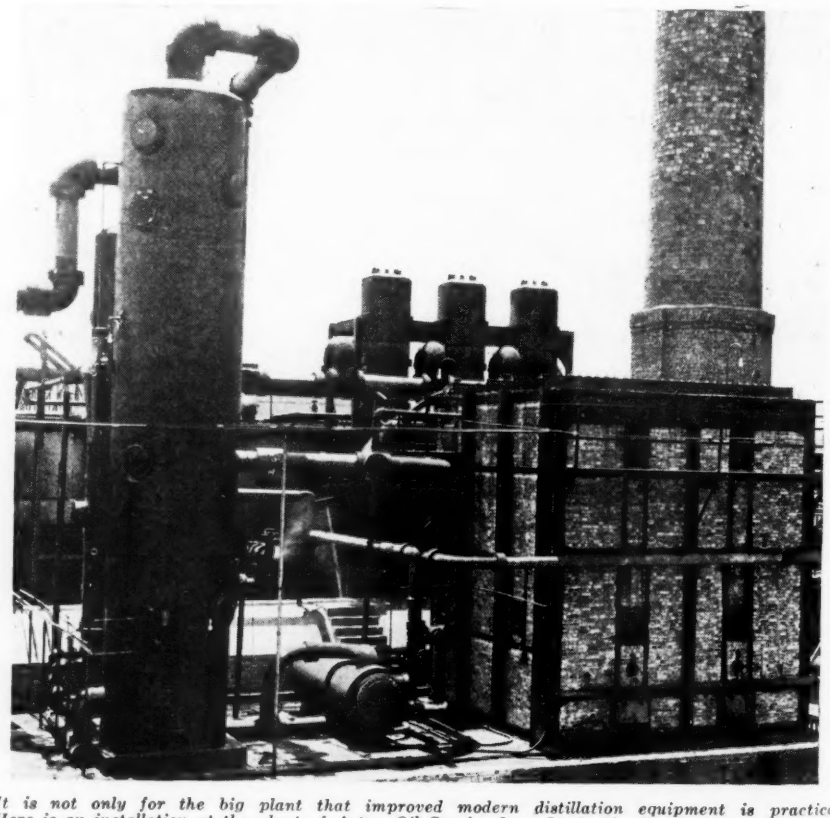
The transportation problem has real horns on it. Because a large number of refineries are located at points from which it is impossible to ship the volume of products they are able to manufacture to a market that can absorb them at a profit. A good many of these plants are very efficient and were able to make a very good living as long as they held the size of their plants to such dimensions that they could market all their products in territories that prevailing freight rates would permit them to reach.

Shrinking to Fit Market

IF THESE plants go on making products and selling them at a loss or at too small a profit in order to keep their crude contracts, or for any other reason, it is easy to see what is going to happen to them. Their only remedy seems to be either to move part of the plant equipment to some favorable location, or scrap it altogether, thus reducing their capacity again to the size that will permit them to dispose of their entire output at a profit.

This seems like a pretty tough problem but a lot of refiners undoubtedly can and will do it. In fact, some are doing it now; running at half or one third of their capacity. In some cases, undoubtedly, whole refineries will be scrapped bodily, except for the meager salvage that is possible, and entire new refineries built in more advantageous locations to take their place.

The Pure Oil Co., as long ago as a



It is not only for the big plant that improved modern distillation equipment is practical. Here is an installation at the plant of Aetna Oil Service Inc., Louisville, Ky., which is operating at an overall efficiency of 72 per cent. It is handling 1500 barrels of crude a day, taking 76 per cent overhead. H. S. Bell of New York was consulting engineer on this job

One of the big gasoline tanks built by the Standard Oil Co. of New Jersey for gasoline storage. The tank roof is capable of standing half a pound pressure per square inch. It was found that in such a tank, with vents set to open at a half pound instead of a half ounce pressure, "breathing" was reduced by 75 per cent. This means a great reduction inevaporation loss. Some other companies have built tanks with roofs designed to stand one pound or 1½ pounds pressure, which would of course, correspondingly reduce "breathing" and loss. One way in which the industry can reduce operating expenses is by cutting down loss from evaporation of light products, the light ends of stored crude

couple of years, saw what was coming and scrapped two of its refineries, the Cornplanter at Warren, Pa., and one at Cushing, Okla. At the same time they enlarged the capacity of their skimming and cracking plant at Smith's Bluff, Tex. and practically doubled their plant at Marcus Hook, Pa. When they realized that these old plants could no longer be operated profitably under present conditions, they just tore them down, hauled them away and sold the ruins to the junk man.

OTHER companies will do that very thing, to a greater or less degree, during 1928. Right now the Pan American Petroleum & Transport Co., subsidiary of the Standard of Indiana, is negotiating for the building of a refinery in Venezuela where an allied company has large production, while its 25,000 barrel refinery at Destrehan, 30 miles above New Orleans, is running a mere 5000 barrels a day.

So it is likely, from this standpoint, that 1928 will see considerable refinery equipment bought and much refinery construction done.

Of course, the main reasons for these changes probably are connected with transportation — with freight rates. There are reasons, however, also connected with the second problem, namely, manufacturing costs. Refiners recognize keenly that, if they are going to sell refined products in today's markets at a profit, they have to manufacture them mighty cheap. They can't in many cases buy a fancy, high gravity crude and pay a premium for it while their competitor is buying a heavy crude at half the price and getting as much and as good gasoline out of it as the light crude yields.

The largest possible yield of the best possible products has to be obtained from the cheapest crude obtainable at the lowest manufacturing cost by the refiner who would show the prettiest picture on his balance sheet on Dec. 31, 1928. And he knows it.

So refineries that have been running on a certain kind of crude are now being remodelled, rebuilt, or added to, in order to accommodate new crude that has become available at lower cost. Considerable of this sort of work is under way now, an example of it being at the plant of the New Orleans Refining Co. near New Orleans where three 3500-barrel-a-day Trumble pipe stills with Badger fractionating tower installations are being built to run on west Texas crude. The plant was originally built to, and did operate for years, on Mexican crude which is now getting scarce, for this company at any rate.

THE increased difficulty of making a profit will undoubtedly during the year, decide the minds of many refiners definitely to throw out old equipment and replace it with the latest obtainable. In a good many plants there is a large amount of equipment which, though somewhat out of date from the standpoint of the latest knowledge in the art, is yet in excellent shape and capable of fair to good operating efficiency. To decide to scrap equipment of this kind is one of the hardest tasks that ever confronts an executive. He will almost invariably give the old equipment, that represents so great an investment, the benefit of the doubt and decide to postpone replacing it a little longer.

But he isn't likely to do that now when he can see that every fractional part of a cent a gallon, or even a barrel, he can save in making his products may be the difference between success and failure. All the refiner will have to be shown is that the new equipment will do the trick and will more than pay for its cost. Another reason for putting in the latest and best equipment is to lighten the pay roll burden.

So there will be a vast amount of new construction in refineries this year merely for the purpose of putting the plants in shape to make the greatest quantity of the best products at the lowest cost.

The New Processes

PROBLEM number 3 in our list is keeping up with the procession in the matter of new products and new processes. The chief feature of this problem, of course is to produce anti-knock fuels that will sell to the motorist in competition with Ethyl gas and other recognized anti-knock fuels available over wide territories.

With every new model car that comes out the cry of the public becomes more insistent for fuels that will run the new high compression vehicle without the distressing knock on hills or in the mazes of traffic. Refiners this year no doubt will make a more determined effort than ever before to offer widespread and effective competition to Ethyl gas.

Vapor phase cracking seems one way of meeting the demand for anti-knock fuel and the construction of vapor phase cracking units bids fair to go forward rapidly during 1928. Already the Pure Oil Co., having built one of these units, is building another twice as big and according to the company's house organ, Pure Oil News, plans are being made for several others.

One vapor phase cracking plant is being built for the Gulf Refining Co. and The Texas Co. at the Bayonne refinery of the Gulf by Luis de Florez, consulting engineer. These companies

have reached an arrangement on two groups of patents they own and they may be expected to go ahead developing vapor phase cracking.

Sinclair already has done a good deal of work on vapor phase cracking. Doubtless other companies have too, about which nothing is known.

NEW processes are gaining ground for manufacturing motor oil. While these are not new for the most part, the new automobile which is making demands for specialized fuel is also demanding special new types of lubricating oil to support its efforts and smooth out the vibrations of its racing engine and its flying crankshaft.

Vacuum distillation, complete removal of wax from lubricating oil, centrifugal dewaxing, contact filtering,—all of these are gaining ground rapidly among refiners anxious to furnish products that will meet in the best possible fashion the needs of the latest cars. All these demand the buying of much equipment and much engineering and construction work.

A paper by H. S. Bell, published in NATIONAL PETROLEUM NEWS last week discloses the remarkable flexibility of the pipe still and its adaptability to a great diversity of uses and a great variety of crudes. This makes it appear that pipe-still installation, which has been gaining ground for several years, is likely to move forward with still greater strides during 1928. Flue gas recirculating systems will doubtless be in greater demand during this year than ever before.

The labor problem is closely linked up, of course, with this question of manufacturing efficiency. If he is to make a profit the refiner is not going to be able to carry any dead wood on the pay roll.

In fact, this labor situation is said to be very serious along the Jersey coast and may tend toward the gradual removal of much of the activities of these plants to the Gulf where warm weather prevails, where a different class of labor is available and where the labor agitator—as yet—is practically unknown.

Of course, the plenitude of the labor market at present and the fact that refineries are operating with reduced forces puts the refiner in a somewhat favorable position to fight the labor battle. And there is no doubt that he will have to fight it, particularly when his refinery is located in a thickly settled area near big cities.

On the question of crude supply it would seem that the refiner, unless he has a very big plant, has nothing to worry about. There is plenty of crude now, there is likely to be for some time to come and the refiner had better take the cheapest crude he can get and make the most of it, rather than pay a fancy price for special crude.

A. S. CLOSE

Vice president of Hickok Producing Co., Toledo, re-elected president of the American Oil Men's Association at Chicago, March 6, 7 and 8. See story on opposite page

Bryan Runs for Governor of Nebraska Again

LINCOLN, Neb., March 8.—Charles W. Bryan, he of the black skull cap, who ran for vice president of the United States on the Democratic ticket four years ago, is now definitely on record as candidate for governor of Nebraska. He was governing Nebraska back in 1924 when he used state funds to start an oil station in the outskirts of Lincoln as a means of getting notoriety.

Mr. Bryan has said that he sent a telegram to the headquarters of the Standard Oil Co. of Indiana, causing that company to make a tank wagon cut of 6.6 cents, back in that other campaign year. The net result of his state owned oil station was that the state courts ordered it closed a few days after the governor who succeeded Mr. Bryan had permitted it to close by forgetting to buy material for it to sell.

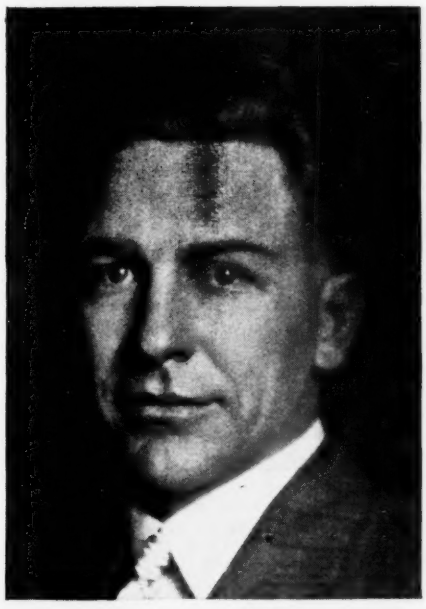
Nevertheless, the sentiment started in 1923 and 1924 in Nebraska has given the city of Lincoln the only legally authorized municipal filling station in the world, voted by the people, fortified by amendment to city charter and consequently O.K.'d by the Supreme Court of the United States.

To Build New Gasoline Plant

TULSA, March 10.—Sinclair Oil & Gas Co. will build a gasoline plant on its Weber lease in the SE of Sec. 18 19N 4W, Logan county. The plant is to be a Braun EE absorption plant with a capacity of 20,000 gallons per day. No compressors will be installed at first, the plant running on well pressure.

Sinclair has a gas well in the southeast corner of the lease which is producing from one of the Tonkawa series of sands. The well is a mile and three quarters north of the Roxana Petroleum Corp.'s Wilcox discovery well.

Marketers at A.O.M.A. Meeting Bend Thoughts to Improve Profits



R. S. WILLIAMS
Of Muncie, Ind., who discussed bulk stations at A. O. M. A. Convention

By Ward K. Halbert
N. P. N. STAFF WRITER

CHICAGO, March 9

CHANGES in the attitude of the oil distributor toward his job were apparent at the convention of the American Oil Men's Association here March 6, 7 and 8. Speakers talked about such matters as over built distributing facilities, burdensome overhead, and mounting costs. Moreover they had the attention of the oil men who came to learn about "Profits for 1928", the theme of the meeting.

There was little merry-making. The attendance was below 300, but the oil men remained throughout the meetings.

The change in trend was obvious even in the exhibit hall. There was displayed a great deal of motor oil handling equipment. More automobile lifts were shown than gasoline pumps.

Most of the former officers and directors were re-elected. There were a few changes in the make-up of the board of directors.

R. S. Williams, R. S. Williams Oil Co., Muncie, Ind., and president of the Indiana Independent Petroleum Marketers Association, in discussing the bulk storage filling station said refiners should not sell their surplus gasoline to these stations at lower prices than they sell gasoline to their contract customers.

The bulk service station was discussed thoroughly, Mr. Williams assuming the position of the bulk station owner and basing his answers to the questions directed at him on the same grounds the bulk station owner defends his economic position. Among the grounds are: the oil company with curb pumps every few blocks in a city is creating its own competition; that it is uneconomical to truck gasoline long distances into the country and sell it for less money than is charged at the starting place, and that all customers pay the same price. The arguments, Mr. Williams said, had a strong public appeal.

"Everybody is not hunting cheap merchandise," said C. O. Beroth, carload marketer and dealer in Chicago suburbs. "Some people are, but not all. If they were, Marshall Field & Co. would have to go out of business because their prices on trademarked products are higher than those of L. Klein, another department store at 14th and Halsted streets. Nobody can have all the business and the customers we want are the profitable ones, willing to pay for quality and service.

"Our friends told us we could not sell high test gasoline at a premium price in Blue Island, Ill., and nearby industrial suburbs. But we are doing it every day. We have regular customers who drive Fords and pay us a 5-cent premium for our best gasoline."

Paul Sweney, Sweney Gasoline & Oil Co., Peoria, said his company made money during a 10-month price war when gasoline retailed at 10 cents in Peoria by selling a better grade of motor oil.

BERT RENTMEESTER, Oconomowoc Oil Co., Oconomowoc, Wis., declared he had never met a single price concession, not even the Standard Oil Co.'s quantity discounts.

"After working for a large oil company for years, I went in business for myself knowing very well that cutting prices would not get me anything," he said. "Being a new company I had no well known brands to merchandise. There was only one thing to do, raise my price and talk quality. That is what I did and that is what I am doing yet."

Mr. Rentmeester's topic was "How I Mind My Own Business." He said: "The man in charge of a company must stay on the job. He must give the influence of his presence to his business to get the best out of his men. If the boss is on the job the careless driver will not drive a truck out and wreck it; the lazy man will

C. O. BEROTH
Chicago, who talked at the A. O. M. A. convention on successful marketing of quality gasoline

A.O.M.A. Officers for 1928

President: A. S. Close, Hickok Producing Co., Toledo, O.

Vice-presidents:

G. I. Sweney, Sweney Gasoline & Oil Co., Peoria, Ill.
J. J. Theisen, Theisen-Clemens Oil Co., St. Joseph, Mich.
J. Bruce Gafill, Gafill Oil Co., South Bend, Ind.

Treasurer: Harry T. Bayard, Atlas Petroleum Co., Chicago.

Secretary: James A. Gilmore, Chicago.

Directors:

John M. Carson, Atlas Petroleum Co., Chicago.
W. W. Springborn, Fairmont Oil Co., Cleveland.
A. C. Carpenter, Lesh Oil Co, Ottawa, Kan.
E. E. Wisler, Herring-Wisler Co., Des Moines.
B. H. Anglin, Indian Refining Co., Lawrenceville, Ill.
R. S. Williams, Williams Oil Co., Muncie, Ind.
Fred Sefton, Minneapolis, Minn.
Messrs. Close and Gafill also are directors.

E. B. RENTMEESTER
Oconomowoc, Wis., who told A. O. M. A. members "How I Mind My Own Business"

not encourage other men to shirk their work, and the irritable station man will not be so quick to give a customer a short answer.

"If the owner expects his men to be interested in their work, he must pass his own interest and enthusiasm along to them. I meet my men in sales meetings. We have dinners together and talk things over. Our most reckless truck driver became the most careful one after we prevailed on him to deliver an address on truck maintenance at one of these meetings."

B. H. Anglin, vice-president, Indian Refining Co., Lawrenceville, Ill., urged the oil men to forget petty grievances among themselves and to develop something for the general good of the industry.

"Instead of fretting about cut price competition, the jobber should simply protest to his refiner about marketing surplus gasoline at prices that enable a price cutter to operate profitably," he said.

FRANK E. PACKARD, tax attorney of the Standard Oil Co. of Indiana, warned the oil men of the dangers of the "chain store bill".

"Most of us are inclined to sympathize with the local merchants in their struggle against chain store competition," he said. "Most of us are members of the chamber of commerce in our own cities, and chambers of commerce usually are back of chain store bills when they are introduced in the state legislature. But we can not afford to favor them.

"I believe no constitutional bill against chain stores ever has been written that exempted filling stations. A law against chain stores is a law against the oil business. They were narrowly defeated in recent legislatures in Missouri, Iowa, Kansas and Wisconsin and some of them attempted to exact an annual penalty of $500 per chain outlet, in the form of a tax. Such a penalty against every filling station in some towns would be almost ruinous."

Mr. Packard revised figures quoted in Detroit and in Springfield, Ill., by saying the industry's 1927 tax burden in the United States would amount to $350,000,000 before it was all paid. And he warned again against the dangers of a 4-cent or a 5-cent gasoline tax which some politicians considered reasonable.

"AT A special session of the legislature last winter in Wisconsin," Mr. Packard said, "that state nearly got its gasoline tax raised from 2 to 5 cents a gallon. The advocates of the additional 3-cent burden wanted the money to support the state's free system of higher education."

Frank W. Lovejoy, Vacuum Oil Co., New York, pinch hit for A. S. Close, vice president and general manager of the Hickok Producing Co., Toledo, O., who was to have spoken at the opening session. Mr. Close is president of the association.

"Some of you are going to have a tough time in 1928," was one of the first few sentences Mr. Lovejoy uttered, "and when we assemble here a year from now, some of you will not be here."

He spoke freely of the overbuilt condition of the filling station and enumerated as among those doomed to go, the unclean station, the palatial station, and the station which is now hard to make pay.

He criticised the general character of service station men, saying, "They are the men who have the reputation of the oil marketer in their hands and most of them are unworthy of the responsibility."

The speaker dwelled on the importance of the woman as a service station customer. "What are you doing to meet the demands of that trade?" he asked. "A million automobiles are registered in women's names. Moreover women are doing more and more of the family driving and the buying of oil and fuel for the automobile. You continue to paint things red although red repels a woman. Orange is the highest color in the spectrum and more attention should be paid to it."

He characterized existing conditions in the oil business as "a profitless prosperity" with a great many units in the industry swapping dollars, unable to make a profit.

With reference to the changing order of things, he said: "The public will decide who will continue in business and who will go. The marketer's function is to meet the demands of the public. I doubt if any filling station today is able to go on selling one line of merchandise."

J. P. Nicholson, president, Klean-Rite Auto Laundry Co., Chicago, said an automobile laundry should attract 150 automobiles a day in order to be of value to a filling station as a trade puller. This assertion, he said, did not reflect upon small laundries as profitable to themselves.

JAMES A. GILMORE
Re-elected secretary of the American Oil Men's Association at the meeting in Chicago, March 6, 7 and 8

"Three-fourths of the cars that come to an automobile laundry will buy some oil product there if it is available" Mr. Nicholson said. "The average single purchase at a filling station is the equivalent of six gallons of gasoline in cost. So it may be estimated that a laundry attracting 150 cars a day will bring the equivalent of 900 gallons of gasoline business to the oil station."

L. F. MARSHALL, Weaver Mfg. Co., Springfield, Ill., lift maker, in discussing the possibilities of the greasing business for the oil industry said:

"A survey we have made leads us to believe there are only 15,000 service stations in the United States adequately equipped to give motorists complete lubrication service But, to be safe in our figures we will assume there are 100,000 such stations.

"There are about 19,000,000 passenger cars registered in the United States and that figures 190 cars for each of the 100,000 complete lubrication stations. Each passenger automobile is entitled to some lubrication service 20 times a year. If each service profited the oil man only 50 cents it would aggregate $190,000,000 a year or $19,000 per year for each of the complete lubrication stations."

12 "Sequence" calls $4721.26 in Fruit and Produce

An Advertisement for Bell Long Distance Telephone Service

A CLEVELAND dealer sold $4721.26 worth of fruit and produce by eight long distance "sequence" telephone calls costing $9.20.

This firm had a list of 15 out-of-town customers who might buy up to a carload at a time. The list was filed in advance with the long distance operator. When notified, she started putting the calls through. As one was finished, another was ready. Of the 15 calls placed at this particular time, 12 were completed and 8 resulted in sales.

"Sequence lists" of this kind are another convenience for saving the time of the long distance telephone user. In one morning another Cleveland firm, a financial house, placed 47 sequence calls in bringing out a new bond issue. Forty-five calls were completed, telephone charges were $40—and sales $82,500. An Ontario milling company representative, at a cost of $8.15, sold seventeen and a half carloads of flour and feed. An Idaho wholesale grocery sold $7000 worth of goods in an hour.

Long distance telephone service can be custom-made to suit your business. No matter what the requirements of your organization, this swift, economical service can be fitted to them.

What distant calls could you profitably make now? You will be surprised how little they will cost. . . . . Calling by number takes less time. . . . *Number, please?*

The Editors' Viewpoint

National Petroleum News

A Fallacy Exploded

ONE of the most fundamental, but least known, truths of the oil industry is brought out by the special committee on markets which reported at the annual meeting of the Western Petroleum Refiners' Association at Kansas City recently.

That truth is that there should be no connection between overproduction of crude oil and overproduction of gasoline.

There can be a relationship, if the refiners insist upon it, but there is no necessity for it.

The committee in its report said:

> "The theory has been advanced that overproduction of gasoline and crude run hand-in-hand. The committee recognizes that, when overproduction of crude exists, pressure is often brought to bear upon refiners to use more crude than refiners' judgment would consider advisable from the standpoint of a manufacturer. However, in many instances experience places the burden for an overproduction of gasoline on the shoulders of refiners."

Experience not only places that burden on the refiners in "many instances". If each case were to be thoroughly investigated one would find, in the last analysis, that the burden is on refiners in every instance. There is no law in the land, or in the economic world, which requires refiners to run more gasoline than the market will absorb.

The fallacy that a surplus of crude must mean a surplus of gasoline has cost the oil industry hundreds of millions. Not only has it cost refiners that, but also marketers—big companies as well as small. Fortunately, many men are beginning to get away from this fallacy, but the report of this refiners' committee is the first public evidence of that change.

The damage to the industry from this fallacious idea has come about through men thinking loosely and talking carelessly. For years it has been the custom, when there is a surplus of crude oil, for everyone interested, directly or indirectly, from the leaders of the industry on down—to bemoan the overproduction of oil; to shout loudly about it; to try and crowd the refinery output for all the refinery can stand in order to get rid of the crude oil; to push the sales department even when the price of finished products drops and to be agreeable to making a still lower price, if necessary, to increase the output.

Buyers of petroleum products have seen this happen for years, so that they know that a surplus production of crude oil means low gasoline prices—down beyond even the level of the crude oil decline.

The consequence is that, when overproduction looms, and the leaders of the industry herald that fact to the world, the buyer knows that he is in a declining market and proceeds to hold out all he can for the bottom of the market in which he has to buy.

We have commented before upon how the leaders of the industry have swept the ground, time and time again, from under the feet of their own sales department—how, by sticking to this policy, they have set up the hardest kind of psychology for their sales department to buck against.

If the cost of this policy was not so great, the situation would be really amusing. Here are sane, capable business men arguing in effect that, just because the farmers produce a surplus of food, we shall all sit down and gorge ourselves on all of that surplus even though we know ahead of time we are going to have acute indigestion.

These bigger oil men would not think of subscribing to that theory of diet, and yet they subscribe to it exactly in their business operations.

There is no cause for having a surplus of gasoline at any time, regardless of the crude oil situation. All that the operators of refineries have to do is to keep their eye on the statistics and see that they do not manufacture more products than they can sell easily, as well as profitably.

The acute financial indigestion that the oil industry has been suffering from in marketing and refining particular is due to this fallacy.—W. C. P.

Resources of Petroleum Substitutes

EXPERTS on the resources of petroleum substitutes that Nature may hold for us when all our crude oil is exhausted seem to be in pretty close accord, considering the period in the future in which they are dealing.

Of course there is still much disagreement as to how long our resources of petroleum from the ground will last, but when we have to depend on oil from shale and lignite, at least we shall know just about where we stand in regard to supply.

The Federal Oil Conservation Board, in its second report to President Coolidge, on this question of substitutes, said that 92,000,000,000 barrels of oil were available from shales in this country. Some two or three years previous a committee from the American Petroleum Institute also made a report on this subject. That committee said that 108,424,801,000 barrels of oil were available from shale, of which 20 per cent of motor fuel could be secured by straight distillation and 30 per cent by cracking.

The federal oil board said that the same amount, 92,000,000,000 barrels, of motor fuel this time, could be secured from distillation of coal, taking all bituminous deposits within 3000 feet of the earth's surface. The A.P.I. committee gave itself more leeway here, also taking coal to 3000 feet deep, but saying that a maximum of 252,000,000,000 barrels of motor fuel, and a minimum of 53,300,000,000 barrels, were available from bituminous coal.

From lignite, the oil board said that 12,000,000,000 barrels of motor fuel were waiting for a time of need, while the A.P.I. committee, a trifle more conservative, placed the amount at 11,700,000,000 barrels.

Just in case you are concerned as to how much of a supply of motor fuel in petroleum substitutes this represents 92,000,000,000 barrels is 300 times as much as motor fuel output in 1927.—V. B. G.

One of the bulk stations of the Standard Oil Company of New Jersey—equipped with Wheaton Type 25 Loading Valves with Spiders, Wheaton Double Swing Joints and Wheaton Single Swing Joints. The truck tank is equipped with Wheaton Type A Tank Truck Faucets.

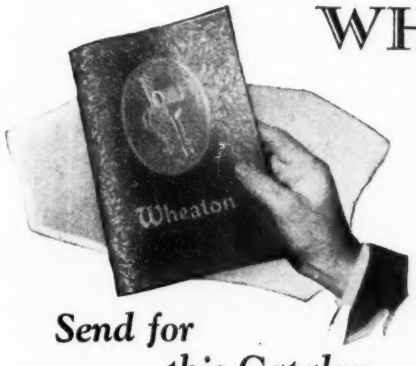
Type A Tank Truck Faucet

Single Swing Joint

Double Swing Joint

Type 25 Loading Valve

Standard Oil Company of New Jersey have been WHEATON Users for Many Years



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This book illustrates and describes the full line of Wheaton Faucets, Valves, Joints, Couplings, Fillers, Nozzles, Fittings, etc. If you haven't a copy, send for one today.

"STANDARD of New Jersey" and Wheaton are old neighbors. And in "Standard's" Newark plant Wheaton Products frequently have been given their first tests. When we originated the first self-closing tank faucet—"spring" faucet, as it was called in those days—the Standard Oil Company of New Jersey put it through its paces, and proved its superiority, before it was manufactured on a regular production basis.

They were the first to install Wheaton all-bronze Swing Joints and Loading Valves in their bulk storage stations. Thenceforth all new valves and swing joints on all "Standard" bulk storage stations have been Wheaton, and many old plants have been remodeled with new Wheaton Fittings.

No higher recommendation can be written of Wheaton Products than that they are standard equipment in the plants of the Standard Oil Company of New Jersey.

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Wheaton

FAUCETS · VALVES · JOINTS · COUPLINGS · FILLERS · NOZZLES · FITTINGS

Compilation Of Mid-Continent Refinery Operations

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National Petroleum News

Mid-Continent Refinery Operations Week Ended March 9 (By Telegraph)

	Kansas	Oklahoma	North & Cent. Texas	North La.-Ark.	Total Week Ended Mar. 9	Total Week Ended Feb. 10
Plants Reporting	12	28	27	12	79	79
Crude Capacity (bbls.)	92,000	157,200	10,400	54,900	40,800	408,600
Cracking Capacity	30,700	52,600	16,200	22,700	122,200	122,200
Da. Av. Crude Runs	55,471 — 3.2	105,638 + 5.6	71,529 + 8.9	49,360 + 19.6	281,998 + 6.7	263,098
Da. Av. Other Oils	9,348 + 45.0	1,689	7,106 + 21.7	630 — 52.6	15,395 + 11.4	11,624
GASOLINE—Gallons						
Stocks, Mar. 2	14,559,000	52,699,000	21,619,000	3,925,000	92,802,000	84,655,000
Prod. 3-2 to 3-9	8,859,000 + 4.1	16,020,000 + 6.0	8,158,000 + 13.9	4,314,000 + 17.0	37,351,000 + 8.3	33,670,000
Ship. 3-2 to 3-9	8,486,000 + 4.0	13,605,000 — 9.9	7,213,000 + 0.7	3,668,000 — 4.4	32,972,000 — 3.8	33,739,000
Stocks, Mar. 9	14,932,000 + 2.6	5,114,000 + 4.6	22,564,000 + 4.4	4,571,000 + 16.5	97,181,000 + 4.7	84,586,000
Ratio Sales to Prod.	95.8%	84.9%	88.4%	85.0%	88.3%	100.2%
KEROSENE—Gallons						
Stocks, Mar. 2	2,675,000	6,605,000	1,965,000	426,000	11,671,000	13,184,000
Prod. 3-2 to 3-9	1,702,000 — 6.8	2,759,000 + 2.4	1,505,000 + 9.5	510,000 + 22.6	6,476,000 + 2.6	6,188,000
Ship. 3-2 to 3-9	1,764,000 — 28.3	2,719,000 — 17.4	1,314,000 + 11.3	133,000 — 71.6	5,930,000 — 19.9	6,324,000
Stocks, Mar. 9	2,613,000 — 2.3	6,645,000 + 0.6	2,156,000 + 9.7	803,000 + 88.5	12,217,000 + 4.7	13,048,000
Ratio Sales to Prod.	103.6%	98.6%	87.3%	26.1%	91.6%	102.2%
STOVE DISTILLATE—Gallons						
Stocks, Mar. 2	826,000	3,195,000	490,000	52,000	4,563,000	5,509,000
Prod. 3-2 to 3-9	364,000 + 31.4	525,000 — 9.3	573,000 + 97.6	116,000 + 10.5	1,578,000 + 26.1	1,407,000
Ship. 3-2 to 3-9	348,000 + 8.0	188,000 — 79.8	45,000 — 85.8	83,000 — 32.0	664,000 — 60.7	1,607,000
Stocks, Mar. 9	842,000 + 1.9	3,532,000 + 10.5	1,018,000 +107.8	85,000 + 63.5	5,477,000 + 20.0	5,309,000
Ratio Sales to Prod.	95.6%	35.8%	7.9%	71.6%	42.1%	114.2%
GAS OIL—Gallons						
Stocks, Mar. 2	6,718,000	32,299,000	15,561,000	6,045,000	60,623,000	59,339,000
Prod. 3-2 to 3-9	1,367,000 — 8.4	1,925,000 — 37.5	1,341,000 — 16.7	1,982,000 + 4.9	6,615,000 — 18.1	4,783,000
Ship. 3-2 to 3-9	1,653,000 + 11.5	1,960,000 — 39.4	1,223,000 — 13.8	1,806,000 + 2.7	6,642,000 — 15.9	5,778,000
Stocks, Mar. 9	6,432,000 — 4.3	32,264,000 — 0.1	15,679,000 + 0.8	6,221,000 + 2.9	60,596,000 — 0.04	58,344,000
Ratio Sales to Prod.	120.9%	101.8%	91.2%	91.1%	100.4%	120.8%
FUEL OIL—Gallons						
Stocks, Mar. 2	9,906,000	28,074,000	37,195,000	15,082,000	90,257,000	90,901,000
Prod. 3-2 to 3-9	6,281,000 — 2.1	5,872,000 — 6.3	9,871,000 + 9.9	6,629,000 + 24.8	28,653,000 + 6.2	27,279,000
Ship. 3-2 to 3-9	5,497,000 — 5.2	7,023,000 — 6.7	8,683,000 — 0.7	4,924,000 — 2.0	26,127,000 — 3.6	27,116,000
Stocks, Mar. 9	10,690,000 + 7.9	26,923,000 — 4.1	38,383,000 + 3.2	16,787,000 + 11.3	92,783,000 + 2.8	91,064,000
Ratio Sales to Prod.	87.5%	119.0%	88.0%	74.3%	91.2%	99.4%

Gasoline Produced by Various Methods, Week Ended March 9

	Kansas	% of Total	Oklahoma	% of Total	Texas	% of Total	Louisiana-Arkansas	% of Total	Total	% of Total
Straight Run	5,253,000	59.3	12,429,000	77.6	6,503,000	79.7	1,682,000	3.0	25,867,000	69.3
Cracked	2,823,000	31.9	2,687,000	16.8	1,402,000	17.2	2,055,000	47.6	8,967,000	24.0
Natural	783,000	8.8	904,000	5.6	253,000	3.1	577,000	13.4	2,517,000	6.7
Total	8,859,000		16,020,000		8,158,000		4,314,000		37,351,000	

+ or — columns are % change from previous week.

All but Oil Stocks Rise in Mid-Continent

Staff Special—By Telegraph
TULSA, March 13

STOCKS of principal commodities except gas oil were increased in the week ended March 9 at 79 Mid-Continent refineries. These plants have a still capacity of 408,600 barrels a day.

Increase in stocks resulted from a substantial increase in crude charged to stills without an increase in shipments of products. Daily average crude runs at the 79 plants were 281,998 barrels, compared with 264,284 barrels a day in the week ended March 2, an increase of 17,714 barrels or 6.7 per cent. Runs of partly refined oils were increased from 13,815 barrels daily average to 15,395 barrels.

Only Kansas refiners reduced crude runs, averaging 55,471 barrels daily last week and 57,319 barrels the week

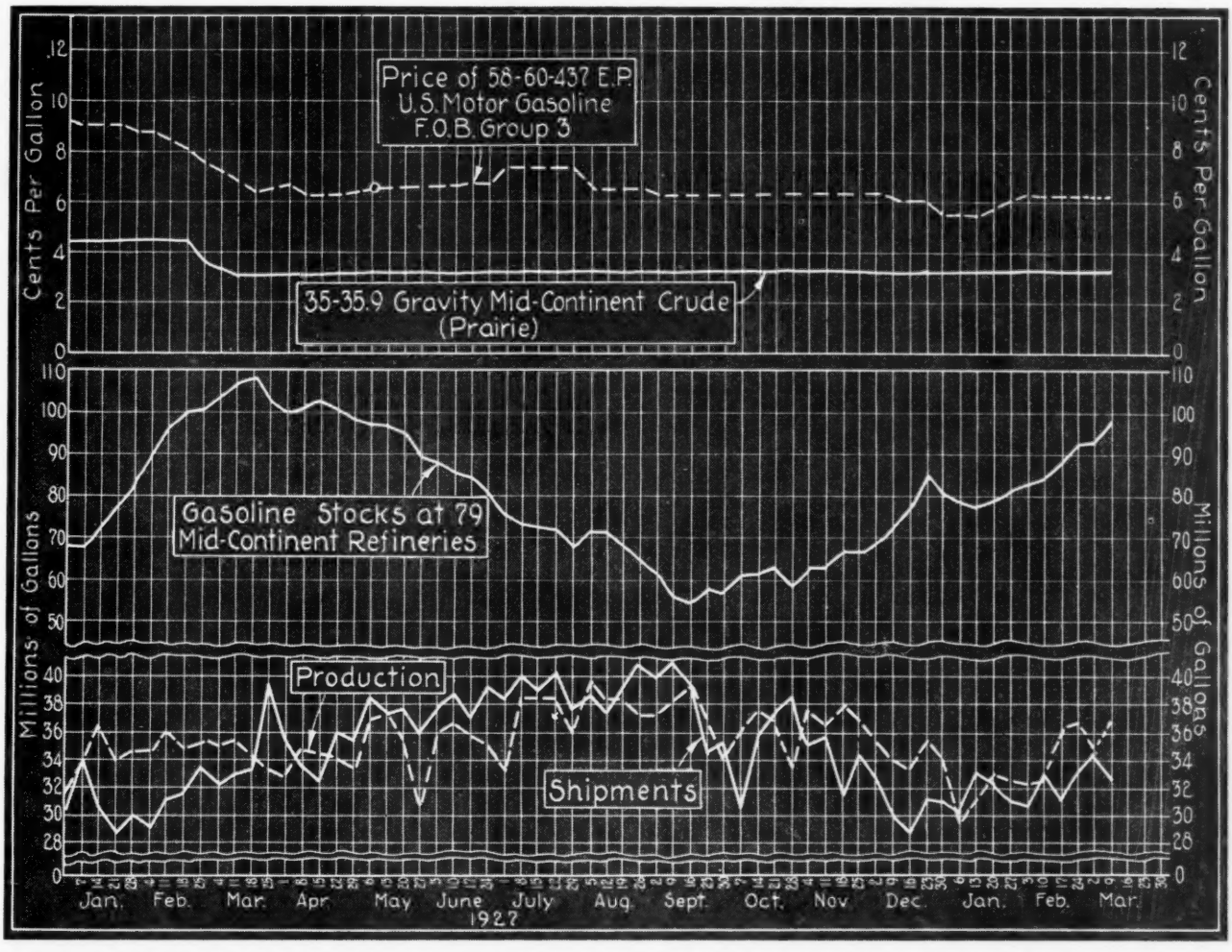
Summary for the Month

Production and shipments, all reporting refineries, for four weeks ended March 9. Change in stocks figured from Feb. 10.

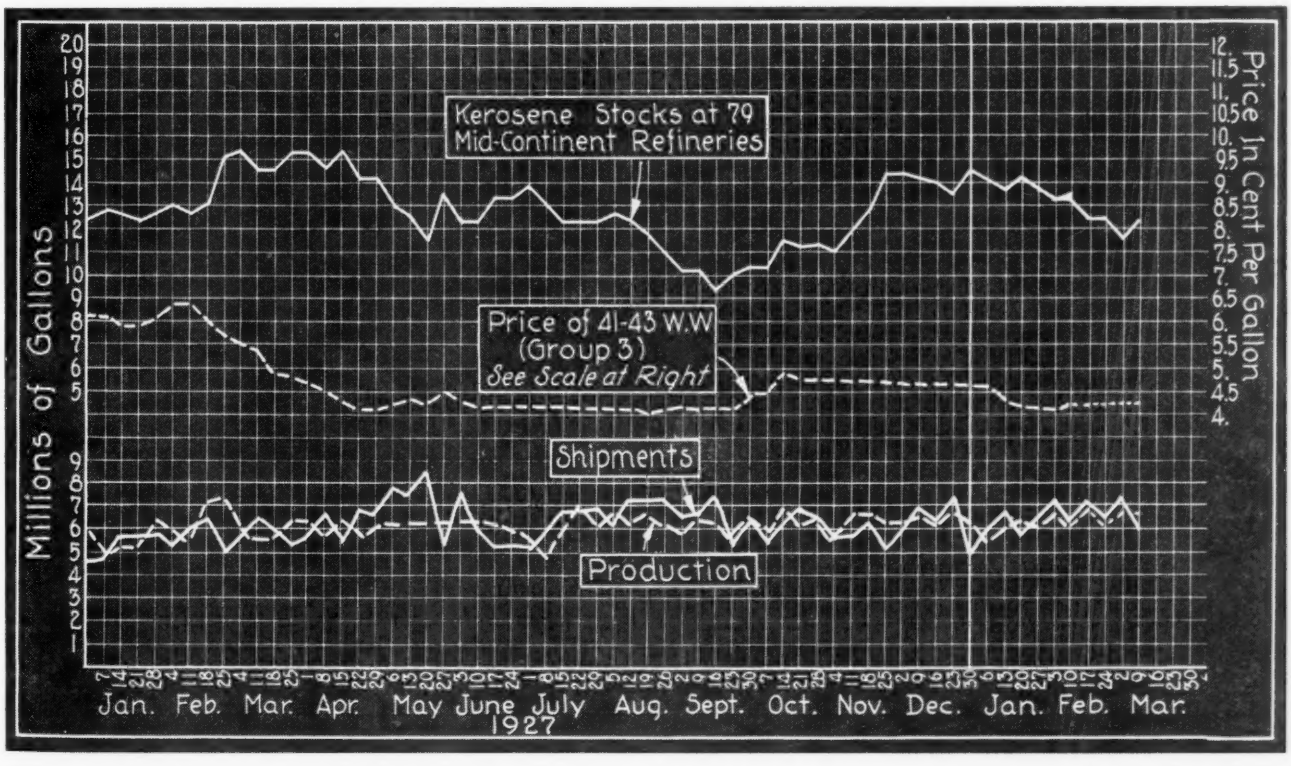
	Gallons
GASOLINE	
Production	144,575,000
Shipments	131,980,000
Net change in stocks	+ 12,595,000
Ratio sales to production	91.3%
KEROSENE	
Production	25,964,000
Shipments	26,795,000
Net change in stocks	— 831,000
Ratio sales to production	103.2%
STOVE DISTILLATE	
Production	5,406,000
Shipments	5,238,000
Net change in stocks	168,000
Ratio sales to production	+ 96.9%
GAS OIL	
Production	26,925,000
Shipments	24,673,000
Net change in stocks	+ 2,252,000
Ratio sales to production	91.6%
FUEL OIL	
Production	115,138,000
Shipments	113,419,000
Net change in stocks	+ 1,719,000
Ratio sales to production	98.5%

Barometer of Mid-Continent Refinery Market—Week Ending March 9

Charted Course of Prices, Production, Shipments, Stock of Principal Refined Products, Week by Week, From Reports Made by 79 Plants to National Petroleum News

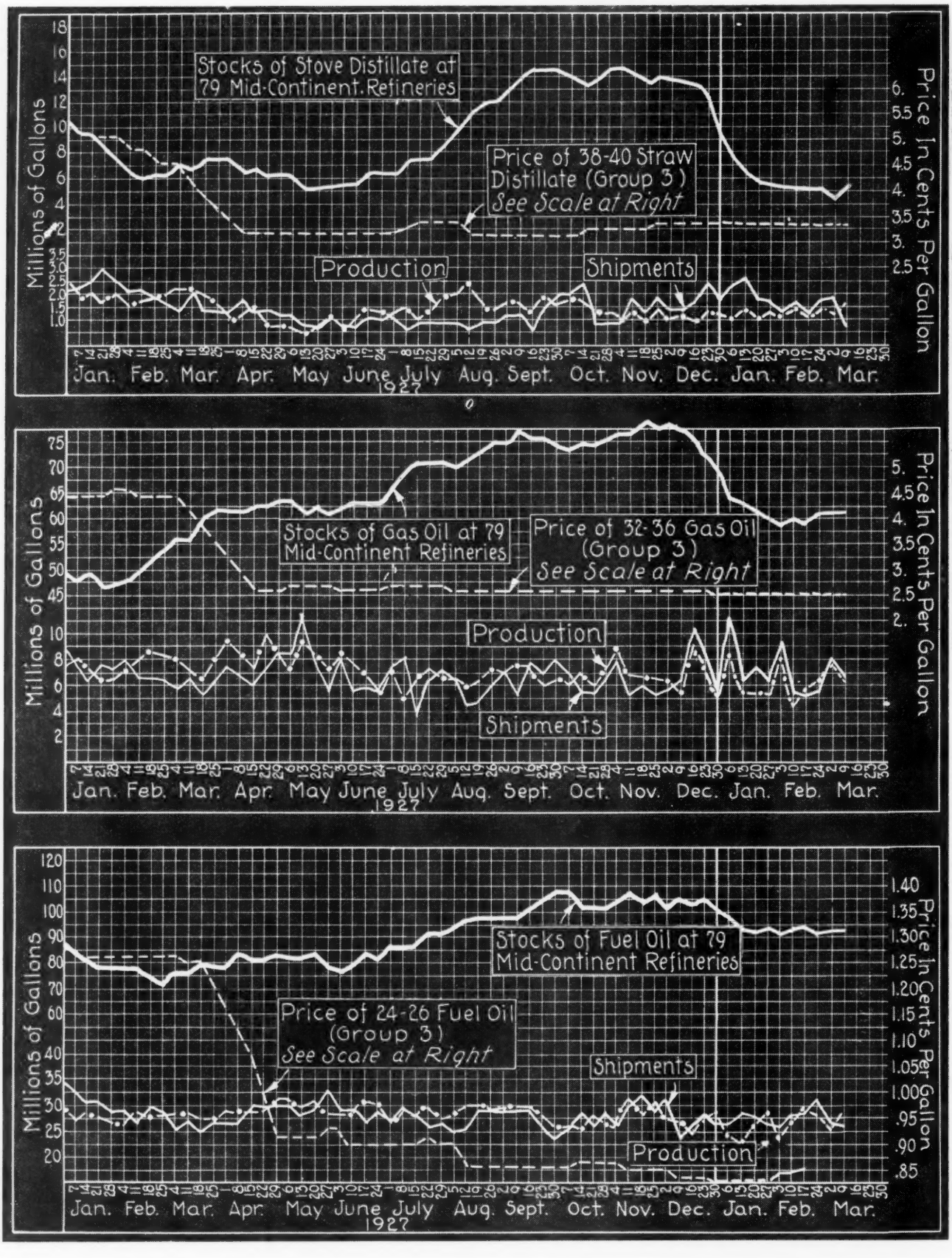


Prices shown above are extended to date shown in Refinery Market and Crude tables in Market section of this issue and stocks, shipments and Production are extended to date shown in table on opposite page

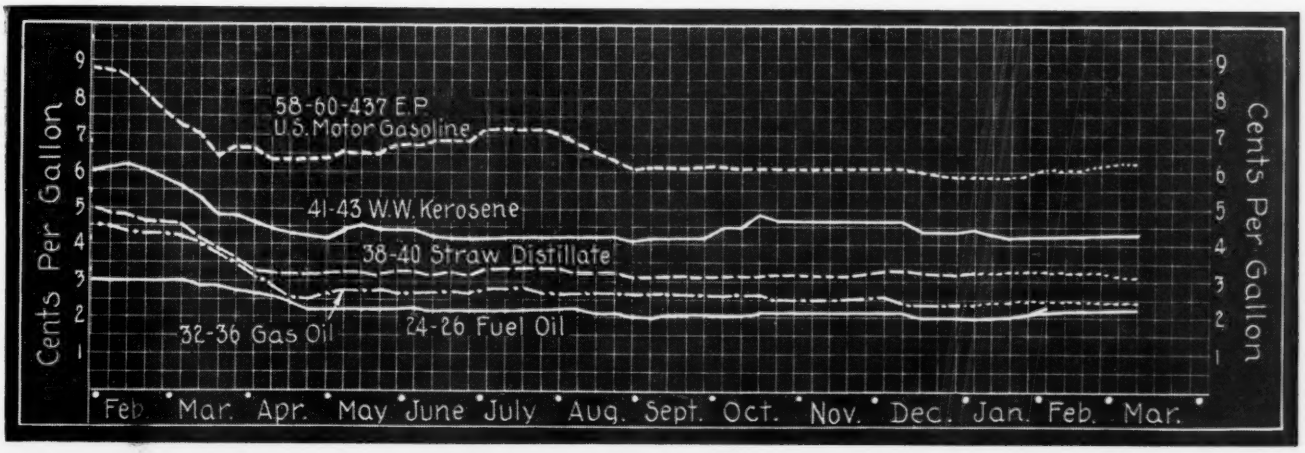


Barometer of Mid-Continent Refinery Market—Week Ending March 9

Charted Course of Prices, Production, Shipments, Stocks of Principal Refined Products, Week by Week, From Reports Made by 79 Plants to National Petroleum News


Stocks of Stove Distillate at 79 Mid-Continent Refineries
Price of 38-40 Straw Distillate (Group 3) See Scale at Right
Production
Shipments
Millions of Gallons
Price In Cents Per Gallon
Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar.
1927
Stocks of Gas Oil at 79 Mid-Continent Refineries
Price of 32-36 Gas Oil (Group 3) See Scale at Right
Production
Shipments
Millions of Gallons
Price In Cents Per Gallon
Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar.
1927
Stocks of Fuel Oil at 79 Mid-Continent Refineries
Price of 24-26 Fuel Oil (Group 3) See Scale at Right
Shipments
Production
Millions of Gallons
Price In Cents Per Gallon
Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar.
1927

Current Prices of Principal Mid-Continent Refined Products


Cents Per Gallon
58-60-437 E.P. U.S. Motor Gasoline
41-43 W.W. Kerosene
38-40 Straw Distillate
32-36 Gas Oil
24-26 Fuel Oil
Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar.

Prices shown are on Group 3 basis and extended to date shown in Refinery Market Tables Section of this Issue

before. Oklahoma refiners increased runs 5628 barrels daily average in 105,638 barrels a day. North and central Texas plants increased runs 5848 barrels average to 71,529 barrels. North Louisiana and Arkansas plants' increase was 8086 barrels daily average to 49,360 barrels a day.

Gasoline production increased 3,000,000 gallons to 37,351,000 gallons. Shipments of gasoline fell 1,290,000 gallons at all reporting plants. Stocks increased 4,379,000 gallons to 97,181,000 gallons which volume represented 20.6 days' supply at the current rate of shipment. March 11, 1927, the same plants held 104,665,000 gallons of gasoline or 22.8 days' supply at the rate of shipments then current.

Shipments of kerosene fell 19.9 per cent to 5,930,000 gallons. Kerosene production was increased 3.6 per cent to 6,476,000 gallons. Stocks increased 546,000 gallons, compared with a reduction of more than 1,000,000 gallons the week before. Kansas was the only group to ship more kerosene than it produced.

Warmer weather caused a large fall in shipments of stove distillate. Shipments totaled 664,000 gallons compared with 1,690,000 gallons the previous week, a fall of 60.7 per cent. Production of distillate was 1,578,000 gallons. Stocks increased 924,000 gallons to 5,477,000 gallons.

Gas oil shipments and production almost balanced. Stocks were reduced 27,000 gallons to 60,596,000 gallons.

Production of fuel oil increased 1,679,000 gallons or 6.2 per cent, to 28,653,000 gallons. Shipments fell 969,000 gallons or 3.6 per cent to 26,127,000 gallons. Stocks increased 2,526,000 gallons to 92,783,000 gallons. Oklahoma refiners reported a substantial reduction in fuel oil stocks but other groups moved less than 90 per cent of their production.

HOUSTON, March 8.—Governor Moody ordered the capitol flag lowered to half mast at Austin, March 5, in honor of the late Arthur Lefevre, editor of The Texaco Star and formerly state superintendent of public education, who died the previous day at Houston. Mr. Lefevre, who was 64 years old, had edited the house organ of The Texas Co., since 1913. He leaves a daughter, Mrs. Catherine Lefevre Fernandez of Mexico City, and a son, Arthur Lefevre, also of The Texas Co., at Houston.

KANSAS CITY, Mo.—L. A. Hinds, refinery salesman of the White Eagle Oil & Refining Co. here, has returned to Kansas City from a trip through Minnesota, South Dakota and Wisconsin, calling on oil jobbers. Mr. Hinds found plenty of snow in those sections and also roads which had not yet been opened up for travel.

Weighted Average Prices Oklahoma Market

In line with National Petroleum News' new policy of carrying a weighted average price for the four more important Oklahoma gasolines in its market section, these weighted average prices, together with the number of cars of each grade sold, as of Monday, March 12, are published below. The figures are not available for publication in the market refinery table on page 171 of this issue.

	Total Cars	Weighted Average
58-60 U. S. Motor,		
437 e. p.	77	6.2552
60-62, 437 e. p.	23	6.6413
60-62, 400 e. p.	12	6.6525
64-66, 375 e. p.	1	7.2500

Note: Above prices are in cents per gallon, f.o.b. Oklahoma refinery, in tank car lots.

Paragon Refining Earns Profit in 1927

CLEVELAND, March 10.—Profit of $311,827 was earned by the Paragon Refining Co., Toledo, after charging off $384,961 to depreciation, President E. W. Edwards has written stockholders.

"During the year, additions to our fixed assets were made totaling $653,156 and, in addition, the company reduced its outstanding car trust certificates $75,000, so that there is but $150,000 still outstanding, which is the only obligation, other than current, the company has.

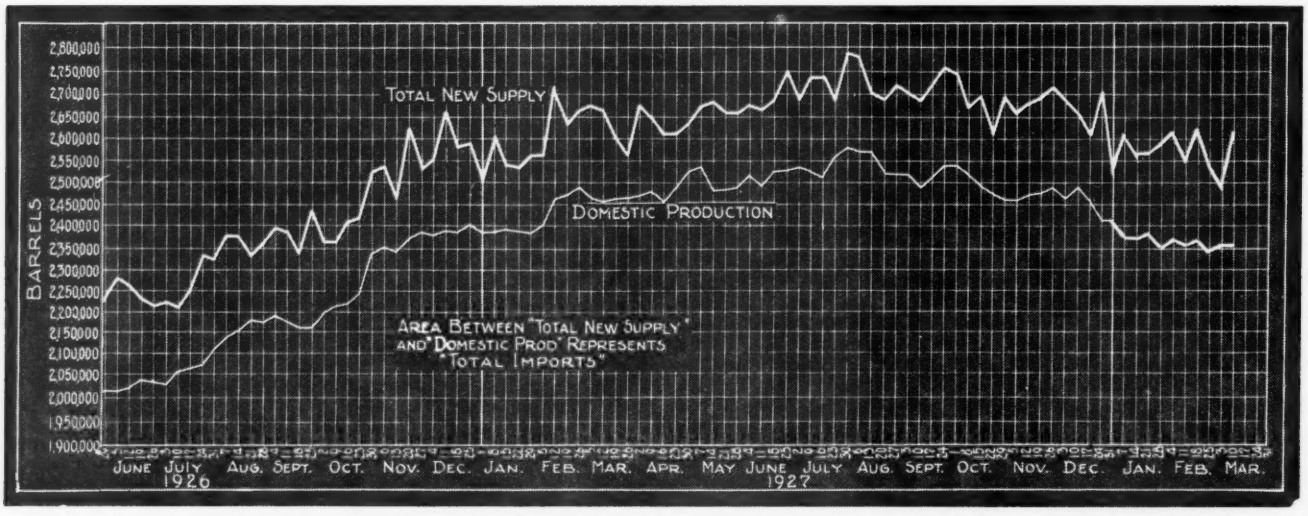
"Notwithstanding these capital expenditures, it was not necessary to do any permanent financing. The company has no outstanding bank loans and the ratio of quick assets to quick liabilities is practically the same, being 2.62 at 1 at the close of the year, as compared to 2.67 to 1 at the beginning."

Phillips Cuts Dividend Rate by One Half

BARTLESVILLE, Okla., March 8.—In announcing the 50 per cent reduction to 37½ cents a share a quarter of the dividend rate of Phillips Petroleum Co., Frank Phillips, president, said:

"The company has a large earned surplus and its cash current position was never better but it was deemed advisable, in the best interests of stockholders, to conserve cash resources and expand inventories and facilities during the present period of depression and low prices in the industry, with the recommendation that when conditions in the industry improve and earnings of the company justify it, a more liberal dividend policy will be established."

Daily Average Crude Oil Production and Imports



Daily average gross output of United States, by fields, for week ending with dates below as compiled by American Petroleum Institute

PRODUCTION SUMMARY

	Mar. 10	Mar. 3
Production east of Rockies	1,741,500	1,742,350
Decrease		850
Total production in U. S.	2,355,700	2,356,750
Decrease		1,050
Crude oil imports	259,857	133,286
Increase		126,571
Total crude supply	2,615,557	2,490,036
Increase		125,521

OKLAHOMA

	Mar. 10	Mar. 3
North Braman	2,900	2,850
South Braman	1,850	1,950
Blackwell	3,750	3,800
Hubbard	2,850	2,850
Thomas	1,650	1,600
Tonkawa	14,900	15,300
Garber	9,900	9,950
Burbank	43,950	44,450
Osage, outside Burbank	30,700	29,500
Watchorn	950	950
Cushing	21,200	21,200
Yale Jennings	8,900	8,900
Davenport	2,350	2,350
Bristow-Slick	24,800	24,900
North Okmulgee	15,750	15,750
Lyons-Deaner	7,500	7,400
Stroud	1,100	1,100
Cromwell	10,100	10,100
Papoose	4,750	4,950
Wewoka	8,200	8,150
Seminole	55,150	56,950
Bowlegs	86,100	*88,400
Searight	18,300	18,150
Little River	39,500	34,100
Earlsboro	105,000	107,700
Duncan District	6,600	6,600
Graham	5,750	5,750
Fox	1,700	1,700
Healdton	14,200	14,200
Hewitt	8,800	8,800
Scholem Alechem	12,500	*13,000
Others	81,750	80,600
Total Oklahoma	653,400	653,950
Decrease		550

KANSAS

	Mar. 10	Mar. 3
Greenwood County	30,500	30,700
Florence-Covert	1,400	1,400
Peabody-Elbing	3,750	3,750
Eldorado-Towanda	14,200	14,250
Augusta-Fox-Bush	4,150	4,200
Rainbow Bend	1,850	1,850
Russell	2,950	3,000
Churchill	12,400	13,100
Oxford	16,600	15,300
Others	25,300	25,200
Total, Kansas	113,100	112,750
Increase		350

NORTH LOUISIANA

	Mar. 10	Mar. 3
Homer	4,350	4,400
Haynesville	6,300	6,400
Caddo, light	11,500	11,650
Caddo, heavy	3,650	4,000
De Soto, Red River	4,000	4,200
Elm Grove	600	650
Bellevue	1,100	1,000
Cotton Valley	4,500	4,500
Urania	8,050	7,850
Pleasant Hill	850	650
Total, North Louisiana	44,900	45,300
Decrease		400

ARKANSAS

	Mar. 10	Mar. 3
El Dorado	5,100	5,100
Champagnolle	900	1,000
Smackover, light	8,550	8,500
Smackover, heavy	66,550	66,950
Stephens	1,100	1,050
Nevada	1,750	1,700
Lisbon	2,300	2,300
Others	100	100
Total, Arkansas	86,350	86,700
Decrease		350

TEXAS (Outside Gulf Coast)

Panhandle District

	Mar. 10	Mar. 3
Hutchinson County	45,400	46,200
Carson County	7,100	7,050
Gray County	19,250	18,600
Wheeler County	950	950
Others	50	50
Total, Panhandle District	72,750	72,850
Decrease		100

North Texas

	Mar. 10	Mar. 3
Burkburnett	12,900	12,750
Electra	11,300	11,150
Iowa Park and K-M-A	1,950	1,900
Wilbarger	9,900	10,000
Archer County	19,000	19,250
Montague-Cooke	12,250	12,550
Others	600	600
Total, North Texas	67,900	68,200
Decrease		300

West Central Texas

	Mar. 10	Mar. 3
Stephens County	7,750	7,700
Eastland-Desdemona	8,600	8,500
Brown County	12,400	12,250
Coleman County	1,600	1,550
Callahan County	4,050	4,000
Shackleford County	7,000	6,500
Young County	8,600	8,700
Throckmorton County	1,000	1,050
Palo Pinto County	500	500
Jack County	1,450	1,550
Others	650	500
Total, West Central Texas	53,600	52,800
Increase		800

West Texas

	Mar. 10	Mar. 3
Jones County	1,250	1,000
Mitchell and Scurry Counties	3,300	3,300
Howard County	4,050	4,200
Reagan County	19,900	19,700
Crane and Upton Counties	86,000	90,500
Crockett County	2,750	2,500
Pecos County	46,400	45,900
Winkler	138,500	136,300
Others	2,000	2,200
Total, West Tex.	304,150	305,600
Decrease		1,450

EAST CENTRAL TEXAS

	Mar. 10	Mar. 3
Mexia	7,300	7,350
Currie	500	500
Richland	500	500
Wortham	1,800	1,850
Corsicana-Powell	11,500	11,600
Nigger Creek	1,300	1,300
Total, East Central Texas	22,900	23,100
Decrease		200

Southwest Texas

	Mar. 10	Mar. 3
Luling	13,950	13,700
Lytton Springs	1,500	1,600
Somerset	800	800
Laredo District	6,600	6,500
Piedras Pintas	.....	.....
Dale	400	400
Others	400	400
Total, Southwest Texas	23,650	23,400
Increase		250
Total, Texas—(Outside Gulf Coast)	544,950	545,950
Decrease		1,000

GULF COAST

Coastal Texas

	Mar. 10	Mar. 3
West Columbia	8,400	8,000
Damon Mound	950	900
Big Creek	2,050	2,150
Boling	2,700	2,300
Blue Ridge	4,650	4,150
Pierce Junction	7,500	8,250
Humble	1,400	1,450
Goose Creek	7,200	7,500
South Liberty	4,200	4,000
Hull	11,600	12,000
Saratoga	1,050	1,050
Batson	1,400	1,400
Barber's Hill	650	650
Sour Lake	3,550	3,400
Spindletop	37,900	34,400
Orange County	4,300	4,400
Others	3,250	3,450
Total, Coastal Texas	102,750	99,450
Increase		3,300

Coastal Louisiana

	Mar. 10	Mar. 3
Vinton	4,900	4,500
Lockport	4,400	5,200
Sorrento Dome	800	.....
Evangeline	1,000	950
East Hackberry	2,050	.....
Edgerly	1,300	1,400
Sweet Lake	1,550	.....
Others	500	6,950
Total, Coastal Louisiana	16,500	19,000
Decrease		2,500
Total, Gulf Coast	119,250	118,450
Increase		800

ROCKY MOUNTAIN

Wyoming

	Mar. 10	Mar. 3
Salt Creek	38,450	39,700
Grass Creek	2,500	2,350
Elk Basin	1,150	1,000
Big Muddy	2,650	2,700
Lost Soldier	4,250	2,900
Rock Creek	2,800	2,650
Lance Creek	650	650
Teapot Dome	.....	.....
Others	4,100	4,000
Total, Wyoming	56,550	55,950
Increase		600

Montana

	Mar. 10	Mar. 3
Cat Creek	1,800	1,800
Sunburst	9,000	9,000
Others	150	150
Total, Montana	10,950	10,950

Colorado

	Mar. 10	Mar. 3
Moffat (Craig)	1,300	1,150
Fort Collins	3,200	3,200
Florence	1,200	1,200
Others	1,750	1,700
Total, Colorado	7,450	7,250
Increase		200

New Mexico

	Mar. 10	Mar. 3
Table Mesa	350	.....
Hogback	500	500
Artesia	1,300	1,250
Rattlesnake	.....	100
Others	200	250
Total, New Mexico	2,350	2,100
Increase		250
Total, Rocky Mountain	77,300	76,250
Increase		1,050

CALIFORNIA

	Mar. 10	Mar. 3
Santa Fe Springs	38,000	38,000
Long Beach	118,500	119,000
Huntington Beach	58,500	58,500
Torrance	19,500	19,500
Dominguez	12,500	12,500
Rosecrans	7,000	7,000
Inglewood	29,800	30,000
Midway-Sunset	80,000	79,500
Ventura Avenue	52,500	53,500
Seal Beach	39,500	39,500
Others	158,400	157,400
Total, California	614,200	614,400
Decrease		200

EASTERN

	Mar. 10	Mar. 3
(Including Ill., Ind., Ky., Ohio, W. Va., Pa., and N. Y.)	102,250	103,000
Decrease		750

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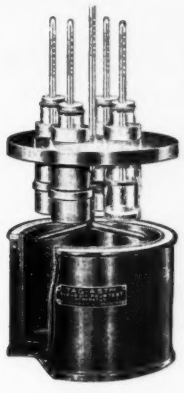

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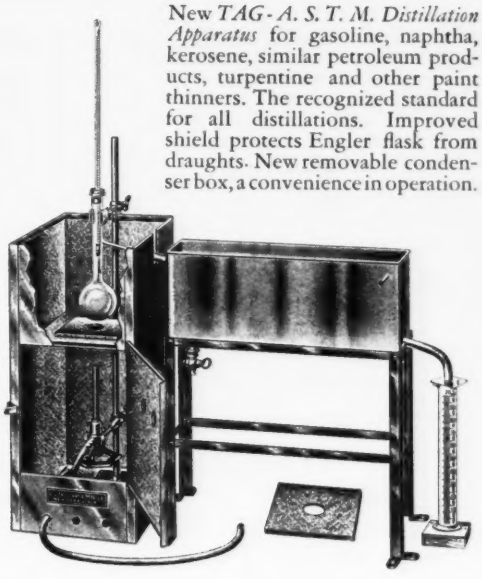

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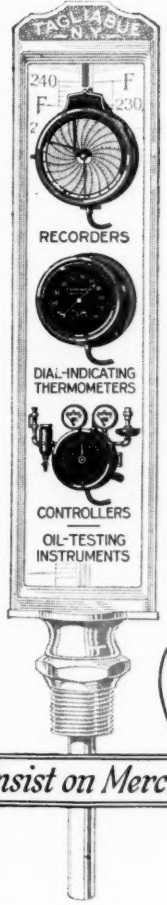

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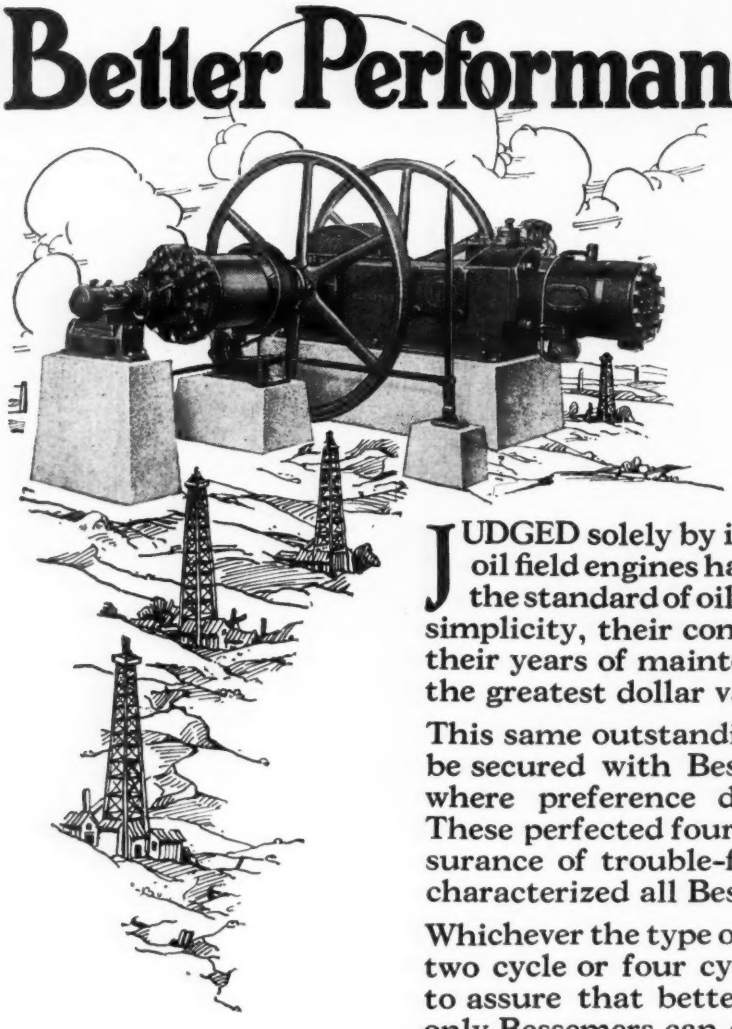

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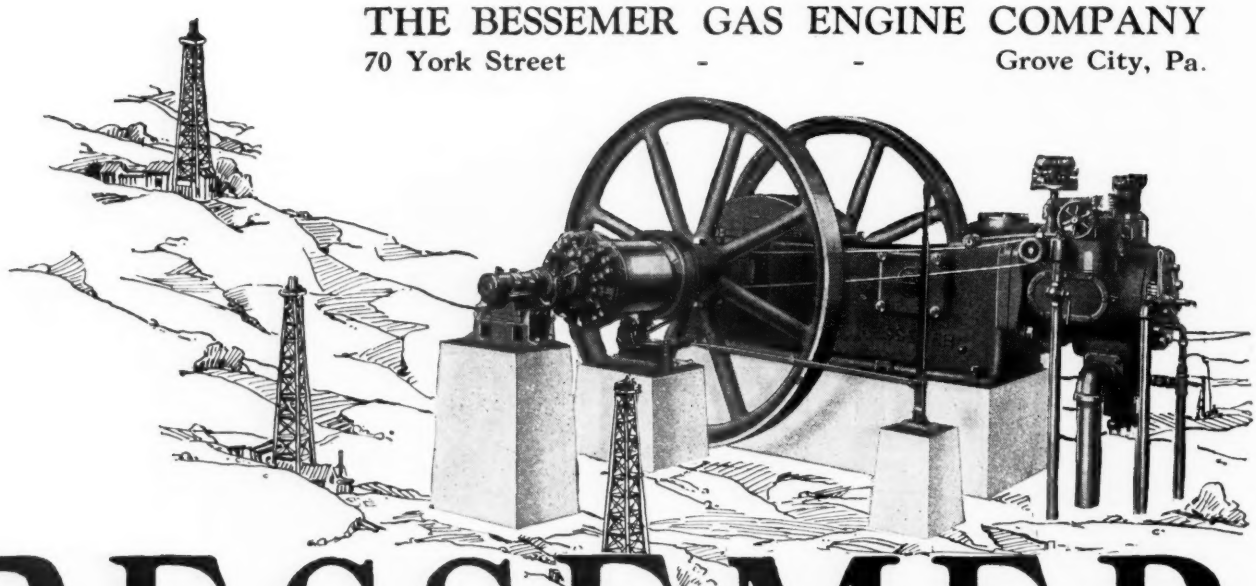

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BESSEMER OIL FIELD ENGINES – COMPRESSORS VACUUM PUMPS – ROLLER PUMPING POWERS

Seminole District Falls Below 300,000; New Pool Further Limited

By Lawrence E. Smith
N. P. N. STAFF WRITER

TULSA, March 10

THE news is as follows: On Saturday, March 10, the Seminole district production fell below the 300,000-barrel mark for the first time in more than a year. Its figure was 298,000 barrels.

The district crossed this point during the week Feb. 9-16, 1927, and except for about one day a week or so later, has remained above 300,000 barrels ever since. It was something of a historic date in the Mid-Continent and it was too bad that it happened on Saturday. Otherwise, a half holiday could have been declared to celebrate the news.

Seriously, although the district has been on the brink of a drop below 300,000 barrels for some time, the actual fact of its going below lends a little hope and encouragement to the operator. There is a certain significance about that amount of production and if it gets down where you write "2" instead of "3" as the first of the six figures, it seems quite a lot less. There are a few gleams of light in the Mid-Continent situation now.

One of them is the decline in production, one of them is the further limiting of the pool in Twp. 8-5, west of the Bowlegs pool. This was held in awe for many months. Barnsdall Oil Co. drilled into substantial production in 14-8-5, but shortly thereafter the Indian Territory Illuminating Oil Co. found the Wilcox full of water in 16-8-5. Now The Texas Co. in 12-8-5, topped the Wilcox at 4695 feet, drilled to total depth of 4701 feet and got nothing but water. This well ran about 400 feet lower structurally than the Barnsdall well, a half mile away.

BARNSDALL'S well was opened during the week for a short while and was found to be a little sluggish, but no water appeared. The restrictions on this area run to April 1 and sometime soon a meeting will be held to decide whether to extend the restriction or set up a co-operative testing plan such as is in effect in south Little River field.

The wells south of Little River continued during the week to produce in notable manner. Snowden & McSweeney's No. 1 Tiger, in 13-7-6, on one day late in the week made 3,572 barrels. Its total depth is now 4,321½ feet and while it is making about 1 per cent water, the oil is not cutting badly. The other producer in this territory. Independent Oil & Gas Co. and Highway Oil & Refining Co.'s No. 1 Hotulka, in 23-7-6, made 2,597 barrels in one 24-hour period, after having been deepened 2 feet to total depth of 4,326 feet. The top of the Wilcox in this well was 4,323 feet. Both these wells were opened to full production on March 1.

Aside from a well of the Prairie Oil & Gas Co. giving a little northern extension to the Little River field, other completions in the five pools of the district were either inside or just on the fringe of production and without significance. The Prairie well referred to, in the SW corner of 25-8-6, moved production two locations northeast of the extreme northern well in Little River. It topped the Wilcox at 4276 and was drilled 11 feet in where oil rose 2,000 feet in the hole and the well made 100 barrels on the swab. No water has appeared.

In the territory southwest of the main Seminole district, the most talked of well is the McCulloch and Mid-Continent Petroleum Corp.'s test in the NWNW SE of 25-7-4E. On March 8 it made 1620 barrels in 22 hours. It started making oil at depth of 4139 and now has total depth of 4175 feet. The oil is coming from the Simpson formation and the last foot drilled yielded water. The oil is 41 degrees A. P. I. gravity at 68 degrees Fahr. The operators plan to carry this to the Wilcox and in the meantime offsetting neighbors are delaying drilling.

IN THE Osage, Prairie Oil & Gas Co. and A. G. Oliphant got a good well on the tract which they purchased at the last sale for $300,000. No. 2 well, in the NW SW NW of 21-27-6E, found Burbank sand at 2897-2935 feet and made 1,700 barrels natural the first 24 hours. No. 1 on this lease came in Feb. 9 for 1,080 barrels and No. 3 is being completed.

In Logan county, Welch, Acton & Brown and Harris & Haun were drilling at 6466 feet in the No. 1 Hall, NE SE of 11-18-4W. This well caused some excitement several months ago when it found production in the Layton sand at 4748-85 feet and it has been produced through Bradenhead from that level while drilling to the Wilcox. At its present depth it is in the Simpson formation, just above the Wilcox, with nothing showing. Other Wilcox wells in this area have made oil from the Simpson.

Another failure in this area is Sinclair Oil & Gas Co.'s No. 1 Knecht, SW NE of 28-18-4W. It was drilled to 6325 feet and got a hole full of water. It is being plugged back to 4200 feet where it will make a small well.

Standard Proves New Area In Eastern Venezuela

HOUSTON, March 8.—The completion of a 2000-barrel well at drilling depth of 2240 feet in wildcat territory of eastern Venezuela is reported from Maracaibo. The well, No. 1 Moneb, belongs to the Standard Oil Co. of Venezuela, subsidiary of the Standard Oil Co. of New Jersey.

Reports reaching this country are to the effect the well blew out, Feb. 23. Additional details are lacking. The remoteness of the well from outlet facilities, however, indicates its importance pivots almost entirely on its proving of reserve crude for the future. It is believed the well will exert no immediate economic influence.

Mid-Kansas Extends Yates Field to Northeast

HOUSTON, March 8.—Completion of the F-1 Yates test of the Mid-Kansas & Transcontinental partnership, in sec. 63. I&GN block 1, Pecos county, carried production of the Yates field three-quarters of a mile north of the previously proved development area. The well tested 242 barrels an hour on a 6-hour gauge, after which it was pinched to 562 barrels daily through a one-quarter-inch flow line.

As the Yates field structure trends from northwest-southeast, the F-1 well proves new ground northeast of earlier developments.

Seminole District Production by Companies and Leases, March 7 and February 29, 1928

BOWLEGS

Company	Farm	S.T.R.	March 7 Wells	March 7 Prod.	Feb. 29 Wells	Feb. 29 Prod.
Amerada	Rascoe	15- 8-6	8	2,280	8	2,250
Atlantic	Baker	1- 8-6	4	594	4	625
Atlantic	Fleet	23- 8-6	4	520	4	485
Atlantic	Grayson	21- 8-6	3	679	3	844
Atlantic	A. Jones	10- 8-6	3	105	3	105
Atlantic	C. Jones	9- 8-6	2	244	2	295
Total Atlantic			16	2,142	16	2,354
Barnsdall	McNac	28- 8-6	1	30	1	30
Barnsdall	Murrow	11- 8-6	4	799	4	784
Total Barnsdall			5	829	5	814
Carter	Bowlegs	15- 8-6	4	1,440	4	1,440
Carter	Burden	23- 8-6	3	290	3	300
Carter	Harjoche	15- 8-6	6	825	6	795
Carter	Hilly	23- 8-6	3	1,005	3	1,000
Carter	Jones	11- 8-6	4	1,640	4	1,780
Carter	McGeisey	21- 8-6	1	15	1	25
Carter	Melisse	9- 8-6	1	215	1	303
Carter	Walker	15- 8-6	4	675	4	730
Carter	Wise	23- 8-6	12	3,810	12	3,660
Total Carter			34	9,915	34	10 031
Empire	Lacey	15- 8-6	6	602	6	685
Empire	Wise	23- 8-6	2	570	2	577
Total Empire			8	1,172	8	1,242
Gypsy	Bowlegs	22- 8-6	1	70	1	255
Gypsy	Bradley	8- 8-6	1	0	1	5
Gypsy	Cumsey	8- 8-6	4	1,322	4	1,475
Gypsy	Dosar	7- 8-6	1	100	1	100
Gypsy	Grayson	13- 8-6	4	897	4	1,035
Gypsy	Harjoche	10- 8-6	2	3,675	2	3,695
Gypsy	Henderson		0	0	1	68
Gypsy	Jones	11- 8-6	1	347	1	360
Gypsy	Walker	15- 8-6	8	2,050	8	1,835
Gypsy	Wise	23- 8-6	3	317	3	257
Total Gypsy			25	8,778	26	9,085
I. T. I. O.	Barnett-A	24- 8-6	2	219	2	231
I. T. I. O.	Barnett-B	24- 8-6	1	215	1	237
I. T. I. O.	Billington	22- 8-6	5	883	5	980
I. T. I. O.	Bowlegs	22- 8-6	11	1,905	11	1,792
I. T. I. O.	Davis	13- 8-6	4	1,377	4	1.340
I. T. I. O.	Fay	18- 8-6	9	2,448	9	2,431
I. T. I. O.	Goforth	15- 8-6	12	1.689	12	1,439
I. T. I. O.	Livingston	15- 8-6	11	3,598	11	4,062
I. T. I. O.	Lizzie	11- 8-6	2	527	2	523
I. T. I. O.	Walker	15- 8-6	8	985	8	985
I. T. I. O.	Wilmont	15- 8-6	4	753	4	822
I. T. I. O.	Work		2	124	2	124
I. T. I. O.	Youngblood	22- 8-6	2	124	2	269
Total I. T. I. O.			74	14,847	74	14 997
McCulloch	Bowlegs	22- 8-6	3	360	3	345
Magnolia	Davis-BF	13- 8-6	3	584	2	730
Magnolia	Davis-M	13- 8-6	1	301	1	322
Magnolia	Hammond	10- 8-6	2	430	3	528
Magnolia	Rhodes	10- 8-6	2	4,310	2	4,850
Magnolia	Van Buskirk	9- 8-6	1	201	1	307
Total Magnolia			15	5,826	15	6,737
Mid-Continent	Baker	10- 8-6	4	1,705	4	1,642
Mid-Continent	Bowlegs	22- 8-6	1	25	1	55
Mid-Continent	Smith	12- 8-6	6	690	6	860
Total Mid-Continent			11	2,420	11	2,557
Minnehoma	Bowlegs	15- 8-6	3	325	4	279
Prairie	Gahagan	23- 8-6	4	520	4	365
Prairie	Harber	10- 8-6	8	2,795	8	3,495
Prairie	Jones	11- 8-6	4	450	4	540
Prairie	Templeton	12- 8-6	4	2,755	5	2,590
Prairie	Whitney	23- 8-6	4	520	4	565
Total Prairie			24	7,040	25	7,555
Pure	Reed	14- 8-6	15	3,194	15	3,480
Pure	Strother-D	14- 8-6	4	573	4	505
Pure	Strother-F	10- 8-6	4	995	4	947
Total Pure			23	4,762	23	4,932
Roxana	Taylor	16- 8-6	5	1,022	5	1,091
Shaffer	Lacey	14- 8-6	3	490	3	525
Sinclair	Bowlegs	22- 8-5	1	0	1	75
Sinclair	Cumsey	10- 8-6	4	4,945	4	5,225
Sinclair	Ellen	11- 8-6	6	1,637	7	1,562
Sinclair	Harjo	14- 8-6	3	595	3	765
Sinclair	Jones	8- 8-6	6	4,620	6	5.071
Sinclair	Taylor-M	10- 8-6	4	2,909	4	2,984
Sinclair	Taylor-W	10- 8-6	1	1,683	1	1,783
Sinclair	Walker	22- 8-6	4	940	4	885
Total Sinclair			29	17,329	30	18,350
Texas	Reed	14- 8-6	11	3,150	11	2,975
Tidal	Grayson	13- 8-6	3	965	3	964
Tidal	Harjoche	10- 8-6	6	2,185	6	2,200
Total Tidal			9	3,150	9	3,165
Twin State	Jones	10- 8-6	2	132	2	50
TOTAL BOWLEGS			311	85,939	310	89,571

LITTLE RIVER

Company	Farm	S.T.R.	March 7 Wells	March 7 Prod.	Feb. 29 Wells	Feb. 29 Prod.
Amerada	Fore	35- 8-6	2	1,040	2	1,060
Amerada	Nitey	35- 8-6	3	2,965	3	2,975
Total Amerada			5	4,055	5	4,035
Barnsdall	Hotulke	22- 7-6			1	50
Blackwell	Nitey	35- 8-6	6	2,648	7	2,646
Carter	Fish	1- 7-6	5	1,655	5	1,860
Carter	Jackson	11- 8-6	1	805	1	100
Total Carter			6	2,460	6	1,960
Continental	Cosar	2- 7-6	2	500	3	1,045
Gypsy	Brown	33- 8-6	1	50	1	50
Gypsy	Campbell	36- 8-6	2	117	2	100
Gypsy	Nungee	36- 8-6	1	42	1	45
Gypsy	Pottey	36- 8-6	3	515	3	477
Total Gypsy			7	724	7	672
Independent	Harris	23- 7-6	1	2,597	1	104
Indep. et al	Davis	2- 7-6	2	1,821	2	1,985
Total Independent			3	4,418	3	2,989
I. T. I. O.	Campbell	1- 7-6	1	113	1	133
I. T. I. O.	Dungan	35- 8-6	3	2,541	3	2,561
I. T. I. O.	House-MA	1- 7-6	1	304	1	180
I. T. I. O.	A- House-WE	1- 7-6	1	38	1	48
I. T. I. O.	B- House-WE	2- 7-6	3	1,613	3	1,662
I. T. I. O.	Hull	26- 8-6	1	91	1	0
I. T. I. O.	Jackson	1- 7-6	3	2,172	3	2,110
I. T. I. O.	McCulla	1- 7-6	3	959	3	1,000
I. T. I. O.	Nitey	2- 7-6	7	1,592	7	1,839
I. T. I. O.	Phoebe-A	36- 8-6	3	791	3	732
I. T. I. O.	Phoebe-B	36- 8-6	3	328	4	361
I. T. I. O.	Reed	1- 7-6	1	128	1	113
I. T. I. O.	Sotkneche	1- 7-6	4	1.067	4	1.011
Total I. T. I. O.			34	11.737	34	11.787
Magnolia	Cruse	2- 7-6	1	600	1	670
Magnolia	Dixon		1	53	1	0
Magnolia	Pottey	35- 8-6	3	465	2	473
Total Magnolia			5	1 118	3	1.143
Mid-Continent	Wadsworth	26- 8-6	7	1.025	7	1.020
Mid-Continent	Smith	12- 8-6	1	35	1	40
Total Mid-Continent			8	1 060	8	1,060
Pine et al	Pottey	35- 8-6	2	1.180	2	95
P & R	Dungan	35- 8-6	2	140	2	135
P & R	House	2- 7-6	4	2.105	4	1.825
Total P & R			6	2.245	6	1,960
Roxana	Smith	1- 7-6	1	10	1	7
Shaffer	Narcome		1	105	1	150
Sinclair	Cosar	36- 8-6	2	1.745	2	1,870
Snowden et al	Tiger	13- 8-6	1	3,572	1	93
Superior	Wadsworth	1- 7-6	1	16	1	16
Texas	Coker	1- 7-6	3	620	3	615
Tidal	House	1- 7-6	3	1.285	3	1.292
Tidal	Johnson	1- 7-6	1	75	1	70
Total Tidal			4	1.360	4	1.362
TOTAL LITTLE RIVER			100	39,573	100	32,655

EARLSBORO

Company	Farm	S.T.R.	March 7 Wells	March 7 Prod.	Feb. 29 Wells	Feb. 29 Prod.
Amerada	Anderson	15- 8-5	2	1.485	2	1.400
Amerada	Cowden	4- 8-5	8	1.775	8	1.955
Amerada	Rodgers	3- 9-5	3	1.220	2	1.430
Total Amerada			13	4.480	12	4,785
Atlantic-Sinc	Foreman	18- 9-5	1	95	0	0
Barnsdall	Brown	10- 9-5	4	1,685	4	1.653
Barnsdall	Bruner-F	2- 9-5	2	781	2	1.004
Barnsdall	Bruner-N	11- 9-5	4	1,522	4	1,504
Barnsdall	Cudjo	11- 9-5	1	27	1	97
Barnsdall	Davis-D	11- 9-5	3	1,338	4	1,793
Barnsdall	Davis-J	11- 9-5	4	843	4	706
Barnsdall	Davis-M	11- 9-5	3	140	3	130
Barnsdall	Gibson	9- 9-5	8	2,733	8	2,868
Barnsdall	Hearn	15- 9-5	1	6	1	6
Barnsdall	Ingram	4- 9-5	7	3,634	7	3,912
Barnsdall	Pack	10- 9-5	4	214	4	207
Barnsdall	Peter	10- 9-5	4	317	4	283
Barnsdall	Sango	2- 9-5	3	6,834	3	6,274
Barnsdall	Sebolka	15- 9-5	1	676	1	690
Barnsdall	Sullivan	10- 9-5	2	60	2	64
Barnsdall	Watsutke	12- 9-5	4	1,900	4	1.874
Total Barnsdall			58	22,710	58	22,997
Carter	Davis	13- 9-5	2	540	2	500
Carter	Payne	12- 9-5	3	140	3	145
Carter	Sango	2- 9-5	4	2.725	4	3,190
Total Carter			9	3,405	9	3,795
Continental	Kays	2- 9-5	2	20	2	20
Continental	Spencer	12- 9-5	4	1.130	4	1.020
Total Continental			6	1.150	6	1.040
Empire	Barker	12- 9-5	1	1.380	1	1,370
Empire	Edmundson	3- 9-5	3	1.210	3	1,202
Total Empire			4	2,290	4	2,572
Gypsy	Bruner	10- 9-5	4	2,892	4	2,817
Gypsy	Boro		1	0	1	22
Gypsy	Carter	11- 9-5	10	3,650	10	3,675
Gypsy	Earl	16- 9-5	1	17	1	15
Gypsy	Hunick	5- 9-5	1	2,132	1	2,080
Gypsy	Noble	12- 9-5	4	3,762	4	3,295
Gypsy	Peter	10- 9-5	3	205	3	225
Gypsy	Sango	1- 9-5	5	5,757	5	5,962
Gypsy	State	16- 9-5	4	1,300	4	1,185
Total Gypsy			33	19,715	33	13,314
Independent	Bruner	10- 9-5	4	117	4	282
Independent	Gaines	11- 9-5	4	1,240	4	1,520
Independent	Knapp	8- 9-5	4	2,591	5	2,284
Independent	O'Dell	4- 9-5	1	0	1	15
Independent	Sullivan	10- 9-5	3	160	3	192
Total Independent			16	4,108	17	4,293
Magnolia	Bryant	9- 9-5	6	2,489	6	2,633
Magnolia	Cowden	4- 9-5	4	80	4	62
Magnolia	Edmundson	3- 9-5	3	42	3	42

(*Continued on Page 59*)

Seminole District Production by Companies and Leases, March 7 and February 29, 1928

(Continued from Page 58)

Company	Farm	S.T.R.	March 7 Wells	March 7 Prod.	Feb. 29 Wells	Feb. 29 Prod.
Magnolia	Holmsley	11- 9-5	8	2,174	8	2,032
Magnolia	Ingram	10- 9-5	1	30	1	30
Magnolia	Lena	10- 9-5	3	80	3	83
Magnolia	Seay	12- 9-5	9	3,846	9	3,480
Magnolia	Simpson	10- 9-5	4	258	3	305
Magnolia	Sparks	11- 9-5	7	2,100	7	2,155
Magnolia	Sullivan	12- 9-5	3	16	3	234
Total Magnolia			49	11,115	47	11,056
Mid-Continent	McCumber	9- 9-5	7	415	7	500
Mid-Kansas	Anderson	14- 9-5	4	180	3	200
Phillips	Dunnaway	15- 9-5	1	40	1	20
Phillips	Graham	9- 9-5	4	220	4	440
Total Phillips			5	260	5	460
Prairie	Baker	23- 9-5	1	50	1	50
Prairie	Davis	13- 9-5	4	3,485	5	2,395
Prairie	Graham-C	3- 9-5	2	50	2	25
Prairie	Graham-O	10- 9-5	4	2,125	4	2,350
Prairie	Stidham	11- 9-5	13	4,040	13	4,265
Total Prairie			24	9,750	25	9,085
Roxana	Bayliss	17- 9-5	1	14	1	13
Roxana	Spencer	12- 9-5	2	1,942	2	1,810
Total Roxana			3	1,956	3	1,823
Shaffer	Clark	1- 9-5	6	1,541	6	1,859
Sinclair	Foreman	18- 9-5	1	15	1	15
Sinclair	Hollins	12- 9-5	3	255	3	180
Sinclair	Sango	2- 9-5	2	4,100	2	3,905
Total Sinclair			6	4,370	6	4,100
Skelly	Spencer	12- 9-5	1	808	1	700
Texas	Anderson	2- 9-5	6	850	6	800
Texas	Brown	10- 9-5	8	2,400	8	2,440
Texas	Rodgers	5- 9-5	4	4,542	4	4,610
Texas	Wilmont	10- 9-5	6	3,177	6	3,185
Total Texas			24	10,969	24	11,035
Tidal	Watkins	9- 9-5	8	2,960	8	3,070
Twin State	Barker	12- 9-5	4	125	4	160
Twin State	Hearn	2- 9-5	4	2,500	4	1,900
Total Twin State			8	2,625	8	2,060
TOTAL EARLSBORO			287	105,512	287	104,948
TOTAL LITTLE RIVER			100	39,573	100	32,655
TOTAL SEARIGHT			71	18,141	70	17,748
TOTAL BOWLEGS			311	85,949	310	89,571
TOTAL SEMINOLE			310	54,957	311	56,459
GRAND TOTAL SEMINOLE AREA			1,081	303,822	1,078	301,381
Avg. per well				281		280

Completions in Oklahoma and Kansas, Week Ended March 10, 1928

OKLAHOMA

Beckham County

Company	Well No.	Location	Depth	Init. Prod.
Magnolia	1	NEc NW NW 29-9-23 W	2453-2700	9M

Carter County

Company	Well No.	Location	Depth	Init. Prod.
Merrick-Camx	2	SEc NW SW 20-1-3 W	2988-3446	110
Smith	1	SWc SE NE 27-2-3 W	2090-2127	5
Humble	3	SWc NE NW 29-1-3 W	T.D. 3463	Dry

Creek County

Company	Well No.	Location	Depth	Init. Prod.
Regal	9	SEc 13-18-11 E	T.D. 1905	Dry
Kennedy et al	1	NWc NE NE 26-18-11 E	1929-1942	60
Henry et al	2	SEc SW SE 12-17-10 E	1894-1929	20
Wilcox	2	NEc SE NW 18-14-10 E	3411-3426	260

Grady County

Company	Well No.	Location	Depth	Init. Prod.
Magnolia	7	NWc SE SE 23-5-8 W	1958-2302	13M
Noble et al	5	SEc NE NW 35-5-8 W	2060-2400	15M
Magnolia	3	SEc NW SE 11-4-8 W	2368-2382	3M
Twin State	1	C NW NE 14-4-8 W	2180-2350	OWD 4M
Carter	3	SEc NW NE 17-3-5 W	2547-2550	80
Amerada	1	SEc SW NE 27-3-5 W	T.D. 1695	Dry

Kay County

Company	Well No.	Location	Depth	Init. Prod.
Kiowa	5	NEc 36-29-1 W	947-955	1M
Marland	3	C SW NW 17-29-1 E	2296-2305	30
Tidal	2	C SE SE 18-29-1 E	1392-1434	12½M
Harris-Haun	1	SWc NW 30-29-1 E	T.D. 1293	Dry

Logan County

Company	Well No.	Location	Depth	Init. Prod.
Roxana	1	SWc 17-19-4 W	5980-6082	2306
Mid-Continent	1	SEc NW 16-18-4 W	4020-4032	25&9M

Muskogee County

Company	Well No.	Location	Depth	Init. Prod.
Holt-Ivey	1	NEc SW NW 2-14-18 E	1282-1290	10
Ford	3	SEc NW SE 6-14-19 E	505-523	63
Swindler	3	NEc 17-15-15 E	T.D. 1720	Dry
Sioux	1	NEc SE NW NE 24-13-18 E	T.D. 1416	Dry

Okfuskee County

Company	Well No.	Location	Depth	Init. Prod.
Furman et al	2	NWc 22-10-9 E	T.D. 3238	Dry
Umburn	2	CSL SE SE 3-10-11 E	T.D. 2230	Dry
Sands	1	SWc SE NE 28-12-10 E	3105-3120	30

Okmulgee County

Company	Well No.	Location	Depth	Init. Prod.
Riney et al	3	NEc SE SW 9-14-14 E	1244-1257	30
McClain et al	2	C NW NE 33-13-12 E	718-800	¾M
Roberts	6	NWc SE NE 22-15-11 E	2113-2120	25
Campbell et al	2	CSL NE SW 2-15-12 E	T.D. 2566	Dry
Penrod et al	1	SWc NW SE NW 12-14-12 E	T.D. 2172	Dry
Jennings	4	NWc SE 11-13-13 E	T.D. 2671	Dry

Osage County

Company	Well No.	Location	Depth	Init. Prod.
Wah-Sha-Shee	1	CNL S½ NE 6-27-12 E	T.D. 1933	Dry
Brown	2	NEc SW 3-26-6 E	T.D. 2915	Dry
I. T. I. O.	1	SEc NE 8-25-7 E	T.D. 3175	Dry
Winona	1	CSL NE 19-22-12 E	T.D. 2109	Dry
Phillips	6	NWc NE SW 17-27-6 E	2900-2960	30
Phillips	6	SEc SW SE 17-27-6 E	2890-2955	225
Gypsy	4	NWc SE NE 28-27-6 E	2906-2972	960
Gypsy	8	SWc NW NE 28-27-6 E	2900-2970	500
Gypsy	10	NWc SW NE 28-27-6 E	2903-2967	50
Osage	385	SEc SW NW 5-27-11 E	825-854	1M
Phillips	1	SWc NW 2-26-6 E	2770-2852	757
Carter	3	NEc NW SE 3-26-6 E	2772-2836	120
Carter	6	SEc NE SE 3-26-6 E	2741-2811	435
Pet. Drlg.	21	NWc SW 25-26-8 E	1720-1735	30
Prairie	2	SEc NE NE 10-26-6 E	2820-2882	15 (1 hr.)

Payne County

Company	Well No.	Location	Depth	Init. Prod.
Olean	1	SEc NW SW 24-18-5 E	T.D. 3900	Dry

Pontotoc County

Company	Well No.	Location	Depth	Init. Prod.
Conservative	7	SEc SW 21-5-6 E	T.D. 2737	Dry
American	1	SEc SW NW SW 9-4-6 E	1388-1418	8M

Pottawatomie County

Company	Well No.	Location	Depth	Init. Prod.
Independent	1	SWc SE 18-7-4 E	3906-4190	130
Continental	2	SWc SE NW 19-7-4 E	3728-3803	170
Continental	4	NWc NE SW 19-7-4 E	3709-3795	200

Seminole County

Company	Well No.	Location	Depth	Init. Prod.
Mid-Continent	5	C E½ W½ SW SW 34-10-6 E	4372-4376	10
Carter	4	NWc NE SW 1-9-5 E	4332-4337	650
Gypsy	5	NWc SE 1-9-5 E	4280-4301	1797
Prairie	1	SWc NW SE 10-10-5 E	T.D. 4780	Dry
Slick	1	NEc SW 31-8-6 E	T.D. 4595	Dry
Pine et al	2	NWc SW NE 35-8-6 E	T.D. 4724	Dry

Stephens County

Company	Well No.	Location	Depth	Init. Prod.
Magnolia	2	NWc 20-1-8 W	2270-2280	OWD 20
Pearce-Brown	7	SWc SE 27-1-8 W	1670-1682	40
Nupp-Duff	3	NWc SW NW NE 34-1-8 W	1665-1679	75
Mudge	2	NEc SW SW NE 23-1-5 W	641-659	9
Mudge	3	NWc SW NE 23-1-5 W	747-670	5

Tulsa County

Company	Well No.	Location	Depth	Init. Prod.
Hayden et al	3	SWc NW SW 6-19-10 E	2013-2134	50
Mid-Continent	2	NEC NW 22-16-12 E	2129-2142	25

Wagoner County

Company	Well No.	Location	Depth	Init. Prod.
Bu-Vi-Bar	2	CEL NE SE 30-18-15 E	1225-1253	14
Johnson	4	SEc NW NW 14-16-16 E	T.D. 1651	2½M

KANSAS

Butler County

Company	Well No.	Location	Depth	Init. Prod.
Empire	1	SEc NW SE 22-27-5 E	2712-2744	540
B'asklee et al	1	NWc SW 21-27-6 E	T.D. 3136	OWD Dry

Cowley County

Company	Well No.	Location	Depth	Init. Prod.
Independent et al	1	SWc NW SW SE 15-32-4 E	2965-2991	4½M OWD
McNabb et al	1	Lot-5, Blk-44, 22-32-4 E	2908-2922	5½M
Watchorn	1	SWc 33-33-6 E	448-450	2M
Harris-Haun	1	C NW NW 17-35-3 E	752-767	1M
Harris-Haun	1	C NE NE 18-35-3 E	2100-2115	1½M

Elk County

Company	Well No.	Location	Depth	Init. Prod.
Winemiller et al	1	SWc NW SE 30-3-11 E	T.D. 1884	Dry

Greenwood County

Company	Well No.	Location	Depth	Init. Prod.
Empire	19	NEc NW NW 23-22-11 E	1866-1923	200
Empire	3	SEc NE NE 26-22-12 E	1673-1735	200

Marion County

Company	Well No.	Location	Depth	Init. Prod.
Harwood et al	1	NWc SE SE SE 15-17-4 E	T.D. 2490	Dry
Phillips	1	SEc NE NE 22-17-4 E	2366-2433	230

McPherson County

Company	Well No.	Location	Depth	Init. Prod.
McPherson	1	C SE NE 31-18-2 W	2915-2953	18½M

Rooks County

Company	Well No.	Location	Depth	Init. Prod.
Streeter et al	1	C NW 28-10-16 W	T.D. 3625	Dry

Sumner County

Company	Well No.	Location	Depth	Init. Prod.
Smith-Ash	1	NWc NE SW 23-32-2 E	T.D. 2192	Dry
Roxana	5	SEc SW SE SE 24-31-2 E	1845-1895	125
Roxana	9	SEc NE NW 36-31-2 E	1877-1907	525
Roxana	9	NEc NW SE 14-32-2 E	2033-2089	30
Roxana	10	NWc SW SW SE 14-32-2 E	2014-2111	500
Roxana	2	SWc NE SW 14-32-2 E	1970-2093	1440
Wasson et al	4	SWc SE SW 14-32-2 E	1953-2085	680
Wasson et al	5	NEc SE SE SW 14-32-2 E	1969-2090	650
Wasson et al	6	NWc SE SW 14-32-2 E	1971-2090	1975

Completions in N. E. Central, West, Panhandle and North Texas, Week Ended March 10, 1928

NORTH AND EAST CENTRAL

Brown County

Company	Well Farm	Location Survey	Depth	Init. Prod.
Breeding et al	1-Hickman	Benson	1238-1256	300
Gilman et al	3-Hickman	Benson	1228-1267	900
Sawyer	1-Watson	McGee	1594-1607	6M
Pandem	4-Hutton	Nobles	1172-1180	50
Pandem	4-Curry	Betts	1095-1105	¼M
Richards	3-Curry	Betts	1105-1119	65
Cen. Tex.	3-Alcorn	Honeycutt	1125-1146	60
Clark Buffalo	2-Brown Co. Fee Ld.	Kenney	1087-1095	50
Clark Buffalo	3-Brown Co. Fee Ld.	Kenney	1080-1090	100
Peckham et al	1-Bush	Kenney	1109-1116	100
Hammond et al	1-Mathews	H&TB	1262-1395	5
Westbrook et al	2-Turner	H&TB	T.D. 1472	Dry
Pandem	1-Curry	Betts	T.D. 1114	Dry
Pandem	1-Thomas	Clelland	T.D. 1063	Dry
Syndicate	1-Hutton	Nobles	T.D. 1200	Dry
Rex Tex Py Tex	16-Fry	Stubblefield	T.D. 1481	Dry
Davis et al	1-Perry	Kenney	T.D. 1164	Dry
Lamb-Shaw	1-Perry	Kenney	T.D. 1110	Dry
Lamb-Shaw	2-Perry	Kenney	T.D. 1278	Dry
Lamb-Shaw	3-Cawthney	Harris	T.D. 1507	Dry

Callahan County

Brown	3-Edwards	Comal	T.D. 1665	Dry
House-Harris	1-Clinton	Boal	T.D. 520	Dry
Peer	1-Biggerstaff	SP	T.D. 2553	Dry
Peeples	1-Snider	LAL	T.D. 1050	Dry
Shadbolt et al	2-George	Boal	T.D. 956	Dry

Coleman County

Empire	1-Fox	Case	T.D. 1710	Dry
Urban	1-Goodgion	Williams	T.D. 2160	Dry
Smith et al	1-Broneke	Sproughue	1850-1858	80

Eastland County

Hoosier	9-Fox	McLennan	1620-1626	60
Hoosier	10-Fox	McLennan	1610-1618	20
Belva	3-Good	Stubblefield	3714-3724	1200
Goodwin et al	1-Parker	Van Norman	3015-3030	17.3M
Teatsorth	4-Citizens	Water ET	T.D. 1431	Dry

Jack County

Buttram	8-Jones	SP	2050-2058	60
Seaboard	3-Cullers	Cullers	2012-2025	55

Kaufman County

Carter	1-McMasters	Pyle	T.D. 2686	Dry

Stephens County

Clark et al	1McNabb	TP	1890-1902	25
Clark	3-Riddle	TP	1862-1875	135

NORTH TEXAS

Archer County

Company	Well Farm	Location Survey	Depth	Init. Prod.
United Prod.	3-Perkins	DCSL	1029-1035	18
Golhke et al	3-Wilson	Geraldine	1561-1564	65
Humble et al	1-Wilson	Geraldine	1559-1564	86
Panhandle et al	1-Peeler	Harris	T.D. 1552	Dry
Panhandle et al	1-Farmer	Meade	T.D. 1565	Dry
The Texas	1-Tubberville	JSCL	T.D. 1189	Dry
Gwynn-Humble	1-Bridwell	TE&L	T.D. 1400	Dry

Grayson County

Miller Drlg.	1-Maudlin	Jones	T.D. 1015	Dry

Montague County

Spencer et al	1-Bouldin	Chacon	814-834	35
Carter et al	1-Bouldin	Chacon	794-823	18

Wichita County

Hammon	1-Waggoner	George	T.D. 1952	Dry

Wilbarger County

Silkwood	1-Harrold Pet. Co.	H&TC	852-859	26
The Texas	5-Waggoner	H&TC	2365-2375	100

Young County

Allday	2-Johnson	Sargent	576-586	40
Allday	3-Johnson	Sargent	566-583	75
Cunningham	1-Hawkins	TE&L	506-513	240
Allday et al	1-McKinley	TE&L	504-516	240
Pennell et al	1-Boone	BBB&C	507-516	236
Reed-Wotten	1-Stewart	YCSL	T.D. 635	Dry
Wolfe	2-Lowe	TE&L	T.D. 880	Dry
Stafford	1-Boone	BBB&C	T.D. 703	Dry
Panhandle et al	1-Oatman	Price	T.D. 603	Dry

PANHANDLE

Carson County

Texas	2-Carner	I&GN	2250-2425	37M

Gray County

Phillips	2-Riley	....	2765-2775	26M
Neudigate et al	1-Chapman	H&GN	T.D. 3014	Dry

Hutchinson County

Peterson et al	1-Johnson	A&B	2906-2990	5
Cockrell et al	6-Cockrell	D&SE	T.D. 3068	Dry

Wheeler County

Woodtex	2-Linkey	H&GN	1850-2180	58M
Mid-Kansas	1-Newton	H&GN	1790-1920	25M
Hatcher et al	2-Fee	H&GN	1460-1675	44M

Completions in North Louisiana and Arkansas, Week Ended March 8, 1928

Louisiana—Cotton Valley—Webster Parish

Company	Well	Location	Depth	Yield
Magnolia Pet. Co.	J. L. Munn No. 1	36-23-10	2704	5M gas

Bossier Parish—Cartersville

Northwest Louisiana Gas Co.	Bolinger No. 3	38-23-11	3066	40M gas
Sales & Walker	Kilgore No. 1	31-23-11	3063	35M gas
Texas Company	Wilkerson No. 2	36-23-12	3093	4M gas

Bossier Parish—Bellevue

Humble O. & R.	Bliss & Weatherbee No. 30	15-19-11	5302	dry, aband.

Caddo Parish—Pine Island

Texas Company	D. H. Raines No. 19	15-21-15	4457	junked, aband.

Sabine Parish—Pleasant Hill

Clark & Seip	Moore No. 1	32-10-12	3291	50 bbls.
Ruffin et al	McLeroy No. 1	33-20-12	3255	110 bbls.

Ouachita Parish

Company	Well	Location	Depth	Yield
Peerless Carbon Co.	Moore No. 3	49-20-4E	2175	10M gas
Palmer Corp.	Central No. 2	1-19-4E	2127	6M gas

East Texas—Panola County

Natural Gas & Prod. Co.	T. C. Adams No. 2	Evans HRS	965	2M gas
Texas Company	Adams B-8	Hatcher HRS	1011	salt water, abd.
D. Thomason	Crenshaw No. 3	John Womack HRS	2,300	3M gas

Arkansas—Nevada County

O'Brien et al	William Haynie 3-B-5	1-14-21	1171	25 bbls

Smackover

Little Fay Oil Co.	Robertson No. 4	25-15-16	2050	55 bbls.
W. R. Keever	Kavanaugh B-1	12-17-15	2145	50 bbls.

Union County—Hillsboro

Morefield et al	Hill No. 1	7-18-14	2230	75 bbls

Drilling Operations in Oklahoma, Kansas and Texas, Week Ended March 10, 1928

	March 10 Loc.	Rigs	Drg.	S.D.	Week Ended Total	March 3 Loc.	Rigs	Drg.	S.D.	Total
OKLAHOMA										
Burbank	2	8	23	..	33	2	6	31	..	39
Other Osage	2	6	15	5	28	2	5	20	2	29
Bristow-Cushing	4	8	36	11	59	6	5	37	8	56
North Oklahoma	10	6	65	37	108	11	5	65	40	121
South Oklahoma	11	22	123	27	183	10	16	126	25	177
Muskogee	..	10	36	17	63	..	3	38	17	58
Okmulgee-Bristow	12	37	70	20	139	13	35	70	17	135
Seminole Dist.	20	39	133	13	205	18	33	134	14	199
Total Oklahoma	61	136	501	130	828	62	108	521	123	814

	March 10 Loc.	Rigs	Drg.	S.D.	Week Ended Total	March 3 Loc.	Rigs	Drg.	S.D.	Total
KANSAS	31	66	131	64	292	38	64	129	70	301
TEXAS										
Central	..	106	240	139	485	..	101	227	145	473
Panhandle	..	54	99	72	225	..	51	101	74	226
N. Central	..	60	81	31	172	..	49	91	27	167
West	..	116	197	150	463	..	118	207	148	473
Laredo	..	1	25	19	45	..	1	25	19	45
Total Texas	..	337	642	411	1,390	..	320	651	413	1,384
New Mexico	..	6	15	15	36	..	4	16	17	37
GRAND TOTAL	92	545	1,289	620	2,536	100	496	1,317	623	2,536

Tax Legal on Army Gasoline

HOUSTON, March 8.—The supreme court, in a ruling at Austin, March 7, held valid the 3-cent Texas gasoline tax as applied to dealers selling the federal government. Grayburg Oil Co., San Antonio, had sought to prevent the state levying toll on gasoline furnished army posts at San Antonio. The Grayburg unavailingly set up, first, that in a legal sense it was agent of the federal government and, second, that the product being delivered on land technically not a part of the state (owned by the army) the Texas tax would be in effect "interstate" and, therefore, not legal.

The Groetken Pump Co., Aurora, Ill., has designed a set and trip mechanism to be used with a gasoline meter at service stations. To dispense gasoline with this device, the amount of gasoline required is set and the lever which automatically starts the flow engaged. When the given amount has been delivered, the trip mechanism automatically closes the valve and throws the switch on a motor pump job, and on an air job the mechanism automatically closes the valve and releases the air.

New Field Operations in Oklahoma, Kansas, Panhandle, North, North Central and West Texas, Week Ended March 10, 1928

OKLAHOMA

Caddo County

Company	Well No. Farm	Location
Caddo	1-McKenna	SWc NW NE 5-5-9 W
English et al	1-Prentice	NEc SW 6-5-9 W

Carter County

Simpson-Fell	4-Waller	SEc SW NW 10-4-2 W
Cox-Hamon	1-Vorhees	SWc SE NW 23-1-3 W
Humble	3-Ratliff	SWc NE SW 20-1-3 W
Simpson-Fell	1-Winters	NWc SE SE 19-1-3 W
Magnolia	9-Hardin	SWc SE NE 19-1-3 W
Atlantic	2-Eason	SEc NE SE 19-1-3 W
Texas	1-Woodward	SEc SW SE 15-1-3 W

Creek County

Transcontinental	2-Webster	SEc NE 21-17-7 E
Bu-Vi-Bar	3-Cain	SEc 18-17-7 E
Gibson-Becker et al	4-Tiger	SWc 17-17-7 E
Burton et al	1-Strouville	NWc SE SE 17-19-8 E
Billingslea	1-Clinton	NEc SE NE 21-15-9
Wilcox	3-Kemble et al.	SEc NE NW 18-14-10
Winemiller	1-Abraham	NEc SW SW 5-16-10
Sunray	1-Land	SWc NW SE 7-18-12
Bartlett	2-McIntosh	NWc 28-18-9

Grady County

Twin State	1-Cox	C NE SE 14-4-8 W OWD
Texas	3-Glover	SWc SE NW 13-4-8 W
Commerce Dev	2-Glover	SWc NE SW 13-4-8 W
Hall	1-Wood	SWc NW 12-4-8 W
Magnolia	3-Heathley	SWc NW NE 2-4-8 W
Little Nick	5-McGaughtry	NWc 35-5-8 W
Okla. Nat.	4-Glover	NEc SE NE 27-5-8 W
American Drlg	7-Sanford	C SW SW 23-5-8 W
Okla. Gas. Utilities	4-Serrata	SWc NW NW 25-5-8 W

Hughes County

Catlett et al	1-Oliphant	SWc NW NE 18-9-9 E
Magnolia	1-Reed (River Bed)	NWc SW NW 17-5-8 E

Jefferson County

Sigler et al	1-Pfile	NWc SE SW 17-7-5 W
Carter	5-Jones	SEc NW NE 33-6-5 W

Kay County

Royal	1-Courtney	NWc 8-27-1 E
Industrial	1-Athey	C SE SE 35-28-1 W
Royal	2-Fulton	C SW NE 12-28-1 W

Kiowa County

Gould et al	1-Patten	NWc SW SE 17-5-14 W
Blue Mountain	1-Jones	SEc NW NW 17-5-14 W
McDowell	1-	C SW NE 6-6-15 W
Malernee	1-Kirkland	NWc 35-7-15 W

Muskogee County

Mussellem	2-Evans	SEc SW SW SE 32-14-19 E
Stain et al	1-Cobb	SWc NE NW SW 6-14-19 E
Linthecum	3-Kelly	SEc NW SE SE 5-14-19 E
Dixon	6-Callahan	CEL SW SE 2-14-18 E
Oakland Drlg	1-Jefferson	SWc NE SW NW 21-14-15 E
Slusher	1-Nave	SWc NE SW NW 20-15-20 E

Noble County

Marland et al	1-Kidd	NWc SW 32-20-1 W

Okfuskee County

Holmes et al	1-Hen	SWc SE 16-10-11 E
Umbrum	2-Summer	NWc NE SE 11-10-11 E
Umbrum	5-Tiger	CNL SE NW 2-10-11 E
Amerada	5-Palmer	SWc SE SW 36-10-9 E OWD

Okmulgee County

Pine	1-Strip	SEc NE NW NW 6-12-14 E OWD
Pine	1-Henry	SEc NE NE 30-12-13 E OWD
Claypool et al	1-Banks	NEc NW SE 5-13-12
Saint et al	1-Warren	NEc SW NW 12-14-12 OWD
Pine	3-Eubanks	SEc NE 8-15-14 E
Jennings	3-Kimble	NWc NE NW 23-15-11

Pittsburg County

Quinton et al	1-Perry	SEc SE 9-7-18 E

Osage County

Garden	5-	NWc 34-21-10
I. T. I. O.	6-	NWc NE NE 1-21-9 OWD
Kewanee	13-	SWc NW NE 3-26-6
Kewanee	11-	NEc NW NE 3-26-6
Osage Gas. Prod	336-	NWc SW 5-27-11
Kewanee	7-	SWc NE SW 34-27-6

Payne County

Mulberry	1-Ballard	C SW SW 32-18-4 E

Pontotoc County

Westheimer	1-Milner	SEc 8-5-8 E
Westheimer	2-Milner	SWc SE SE 8-5-8 E
Homa Okla	3-Berry	SEc NE 19-5-8 E

Pottawatomie County

Roxana	1-Jackson	NEc SE NE 20-6-5 E

Seminole County

Ramsey	3-Culley	NEc SE NE 18-5-8 E
Louisiana	4-Reed	NWc NE NE 18-5-8 E
Texas	1-Hyde	NWc SE NW SW 8-5-8 E
Texas	3-Hyde	SEc NE SE 7-5-8 E
Whitney	1-Harjo	NEc NW NE 25-7-6 E
Magnolia	1-Reed	NEc SE NE 22-7-6 E
Sinclair	1-Tewee	NWc SW NE 14-7-6 E
Pure	1-Harjo	NEc SW NE 11-7-6 E
Sinclair	3-Cosar	NWc 36-8-6 E
Magnolia	7-Hammond	NEc NW NE 10-8-6 E

Stephens County

Magnolia	4-Green	SWc SE NW 13-1-4 W
Magnolia	3-Green	SEc SW NW 13-1-4 W
Westheimer	1-Martin	NEc SE 11-1-4 W
Magnolia	1-Humphrey	SEc NE 11-1-4 W
Pace	2-Allen	SWc NW NW NE 3-2-8 W
Mudge	6-Spears	SEc NE SE NW 23-1-5 W
Bear-Cobb	1-Dierkes	SEc SW NE NW 13-2-8 W

Tulsa County

Texas	1-Grayson	SWc NW NE 28-19-10
Sand Sprins Home	2-Unallotted	CSL SE NE 23-19-11
Unger et al	4-Johnson	CWL NE NE 36-19-11
Caldwell et al	1-Hawkins	NWc SW 18-19-12

Wagoner County

Company	Well No. Farm	Location
Peterson et al	2-Jameson	NWc SE NW SW 23-16-16 E
Crichton	2-Childers	CSL SW NW 21-18-17 E

KANSAS

Butler County

Allison et al	5-McGinnis	NEc 9-27-6 E
Davis et al	1-Marshall	NWc 10-27-6 E

Cowley County

Slick	2-Conrad	SWc NW 19-32-3 E
Foster-Deal	1-Reynolds	NWc NE NE 4-33-7 E
Watchorn	1-Esch	C NW NW 4-34-6 E

Dickinson County

Denman et al	2-Lewis	C SE SE 35-31-10 E

Greenwood County

Valley Osage	3-Roglin	C SL SW SE 10-25-13 E

McPherson County

Curley et al	1-Paulson	SEc NW 6-19-2 W

Marion County

Ramsey et al	1-Bolby	SEc NW NE NE 22-17-4 E
Phillips	4-Peterson	SEc SW NW 23-17-4 E

Morris County

Franks et al	1-Malkins	NWc SE 24-16-9 E

Sumner County

Champlin	2-Latta	SEc SW NW 9-30-2 W
Roxana	3-Barnes	CE¼ SW SW 14-32-2 E
Roxana	1-Scroggins	SEc NW SW 14-32-2 E
Wasson et al	8-Gassoway	CW¼ SE SW 14-32-2 E
Endfield et al	1-Houston	NEc SW 1-34-2 E

Woodson County

Fields et al	1-Akins	SEc SW 19-25-14 E

TEXAS

PANHANDLE AND WEST TEXAS

Glasscock County

			Survey
Tate et al	4-Roberts	SEc NE Sec-156, Blk-29	W&NW
Posey	1-Cox	4-S, Sec-29, Blk-33	T&P

Gray County

Sullivan et al	1-Cobb	NEc NW Sec-64, Blk-25	H&GN
Empire	1-Holmes	C NE Sec-179, Blk-B-2	H&GN
Delmar	1-Tipbold	NWc SW Sec-55, Blk-B-2	H&GN
Osborne et al	1-Barrett	SEc NE Sec-111, Blk-3	I&GN

Howard County

F. H. E.	3-Roberts	Sec-156, Blk-29	W&NW
R. H. E.	4-Roberts	Sec-156, Blk-29	W&NW
Merrick et al	1-Clay	CNL SE SE Sec-126, Blk-29	W&NW

Hutchinson County

Alamoso	2-Sanford	Sec-83, Blk-46	H&TC

Mitchell County

California	8-Adams	SW NE NW Sec-11, Blk-28	T&P
Magnolia	5-Foster	SEc Sec-17, Blk-29	T&P

Pecos County

Humble	7-Smith	Sec-36, Blk-194	GC&SF

Potter County

Amarillo	1-Bivins	C NW Sec-27, Blk-O-18	D&P

Terrell County

Keck Pecos Trust	1-Hamilton	C Sec-6, Blk-D-7	EL&RR

Upton County

Snowden et al	2-Hughes	Sec-4	Teer

Wheeler County

Clarke et al	1-Purcell	C NW SW Sec-51, Blk-17	H&GN

Winkler County

Landreth	5-Hendricks	NW NE SW Sec-29, Blk-B-5	PSL
Atlantic	5-Hendricks	SW SE NW Sec-29, Blk-B-5	PSL
Humble	11-Hendricks	Swc NW Sec-41, Blk-B-5	PSL
Southern Crude	88-	NEc Sec-41 Blk-26	PSL

NORTH AND NORTH CENTRAL

Archer County

Simms	22-Tuberville	Blk-173	Carson
Bridwell	2-Bunns	Blk-27	Harris
McGaha et al	2-Wilson	Blk-20	Townsite
Robertson et al	1-Meade	Blk-1, Abstract-13	Blount
Texas et al	1-Graham	Abstract-397	Sweeny
Whitiker	1-Hunter	Abstract-310	McKinly et al.
Fain-McGaha et al.	1-Wilson	Blk-27	Townsite
Fain-McGaha et al.	1-Wilson	Blk-20	Townsite
Galhke et al	1-Taylor	Blk-233	Townsite
Galhke et al	1-Jones et al.	Blk-236	Townsite
Continental et al	1-Helm	Abstract-290	Mordecai
Hines-Trout	1-Andrews	Blk-136	Carson
Mear et al	1-Thurman	Blk-67	Harris
Rose et al	1-Farmer	Blk-9 Abstract-663	Winters

Brown County

Jay Hawk	2-Bapow	Blk-4	Williams
Pandem	2-Curry	——	Betts
Lamb-Shaw	3-Guathney	——	Harris
Charter	4-Byler	Blk-43	T&NO
Rex Tex Py Tex	16-Fry	Blk-622	Stubblefield
Cen Tex	4-Alcorn	Blk-623	Honeycutt
Cranfill et al	3-Newton	Blk-623	Honeycutt
Clark Buffalo	3-Brown Co.	Blk-624	Kenney
Lelsey et al	1-George	Sec-42	HT&B
Wilson et al	1-Spain	Sec-10	H&TB
Aldrich	1-Stanley	Blk-139	Smith
Blanchard et al	1-Curry	Blk-624	Kanney

Callahan County

Bradstreet	5-Waller	——	Vigol
Gorner-Valley	1-Walker	Sec-30	——
Swoveland et al	1-Heyser	Sec-18	Boal
Ames	1-Reed	Sec-315	SP

Coleman County

Rex Tex Py Tex	1-Byrd	Blk-664	Sprague
Anzac et al	1-Alexander	Blk-739	Quigley
Dozier	1-Guthrie	Blk-77	Lipscomb
Cameron et al	1-Baker	Sec-7, Blk-630	Fisk
Hughes	1-Henderson	Sec-17, Blk-755	Pevehouse
Taylor et al	1-Miller	Sec-42	Coleman Co. Sch. Ld.

Comanche County

Scoggin et al	1-Poteet	Sec-45	D&DA

(Continued on Page 62)

New Field Operations in Oklahoma, Kansas, Panhandle, North, North Central and West Texas, Week Ended March 10, 1928

(*Continued from Page 61*)

Company	Well No. Farm	Location	Survey
Eastland County			
Gordon	1-O'Reor	——	Clifton
Cranfill et al	1-Tate	Abstract-356	Ackerman
Texas	1-Turner	Sec-26, Blk-2	H&TC
Charter	1-Turner	Sec-808	BBB&C
Adamson et al	4-Rosenquest	Sec-3, Blk-6	ETRR
Montague County			
Carter et al	2-Bouldin	——	Checon
Shackleford County			
Hughes et al	2-Dillingham	Sec-552	TE&L
Roeser et al	31-Cook	Sec-60	ETRR
Sterling	1-Walker	Abstract-41	Cooper
Freestone County			
Alexander et al	1-Boyd	——	Sanchez
Jack County			
General	1-Simpson	Abstract-356	Landridge
Navarro County			
Wheelock et al	1-Boyd	——	Bragg
Smith County			
Humble	1-Pruitt	——	Henderson
Stephens County			
Lawton et al	1-Langford	Sec-52, Blk-6	T&P
Schimmel Prod	1-Tolle et al	Sec-458	SP
Throckmorton County			
McCurdey et al	1-Reynolds et al.	Sec-19, Blk-2	AB&M
Wilbarger County			
Staley et al	1-Waggoner	Sec-7, Blk-17	H&TC
Texas	2-Waggoner	Sec-5, Blk-5	H&TC
Phillips	8-Waggoner	Sec-46, Blk-4	H&TC
Fain et al	3-Waggoner	Sec-31, Blk-4	H&TC
Young County			
Parket et al	1-Johnson	Blk-3	Sargent
Pennell et al	1-Boyd	Sec-1, Abstract-34	BBB&C
Casey	1-Boone	Sec-1, Abstract-34	BBB&C
Millican et al	1-Johnson	Abstract-253	Sargent
Cunningham	1-Hawkins	Sec-1914	TE&L
Paul	1-Eddleman Bros.	Sec-2692 Abstract-1131	TE&L
Roberts	1-Burke	Sec-4, Abstract-2184	Burk
Jacob	1-Hockaday	Abstract-1263	Upham
Jacob	1-Taylor	——	Baker
Gross et al	1-Hinson	——	Langan
Kleiner et al	3-Langston	Sec-149, Abstract-916	TE&L
Perkins et al	3-Gregg	Abstract-240	Rohus

California Producers Are Pinching in Production

By William E. Green

N. P. N. STAFF WRITER

LOS ANGELES, March 10

THE so-called shut-in movement in California, to conserve gas and curbing production of oil to stop growth in storage, had its real beginning Friday when Ventura avenue field forces received orders to begin pinching in wells. This is expected to reduce oil production of that field about 20 per cent, and shut in at least 60,000,000 cubic feet of gas, and probably more.

The shut-in movement has the full accord of state authorities. In fact the entire program was submitted to the governor's conservation committee for approval before being put into effect. Engineers of the companies involved worked out details in conjunction with engineers of the oil and gas department of the state mining bureau.

The companies affected at Ventura avenue are Associated, Bolsa Chica, General Petroleum, Petroleum Securities (Doheny interests) and Shell. The last available report of daily average production at Ventura avenue was distributed as follows:

	Barrels
Associated Oil Co.	24,500
Bolsa Chica Oil Co.	400
General Petroleum Corp.	3,000
Petroleum Securities Corp.	3,500
Shell Co.	21,500
	52,900

All companies except Bolsa Chica are sharing in the pinching-in process, but this company has only two wells, averaging 200 barrels each, and is flowing no gas to the air. It is also understood that new wells will be permitted to flow undisturbed for 30 days, and then pinched back 20 per cent, basing the shut-in on the average production of the new well for the last three days in the 30-day period. No provision is made for restriction of drilling operations, and the shut-in period can be terminated upon 30 days written notice by one of the companies involved.

The oil-gas ratio in the Ventura avenue field is the highest of any field in the state and for the past several months, the open flow of gas has ranged from around 60,000,000 to 100,000,000 cubic feet daily, according to need of the gas on the part of natural gas distributing companies, and consumption.

Naturally the waste has been less in the winter, as consumption was greater. Engineers will continue to study the situation, and will make further efforts to reduce the waste of gas. Suggestions have been made that the surplus gas be piped to other fields and forced back into the partially depleted sands for repressuring purposes, or storage.

Further closing in of oil production, largely heavy, will be undertaken in the next few weeks. Tentative plans call for the shutting of a large number of wells in the San Joaquin Valley fields, including Kern county, front, Coalinga, Round Mountain, etc. Each field will be considered as a separate problem to be solved without relation to any other field. As the company engineers reach their decision with reference to a field, the entire plan will be laid before the governor's conservation committee or the oil and gas department of the State Mining Bureau for approval.

Thus the consent of a state government department is obtained.

The matter of moving surplus gas from the Seal Beach field to Coyote field is under consideration, the gas to be forced into the formation of that field, repressuring the partially depleted oil sands, and also using the formations as a place of storage. Considerable surplus gas has been pumped into the formations at Coyote for the past several months, but during the past three months, gas has been withdrawn, as it was needed for domestic consumption. Similar plans may be worked out to make use of the remaining surplus gas at Ventura avenue.

Although no oil company officials will discuss the shut-in movement for publication, information comes from members of the governor's committee that it is expected that between 60,000 and 75,000 barrels of oil production will be shut in in various oil fields of the state within 30 days. Around two-thirds of this total will be heavy crude. It is expected that the heaviest shut-in movement will be at Coalingo and in Kern county. It is reported late this week that California Petroleum is already shutting in some of its production at Round Mountain, but the real shut-in movement in the other fields may be delayed several days and probably two or three weeks.

No effort will be made to curb production or drilling at Long Beach, where land ownership is largely in small tracts with field operations in the hands of many operators. This field is now producing around 120,000 barrels daily with 200 wells drilling. A large number of these wells are drilling below 5000 feet, and 18 have perfected water shutoffs, and nearing the completion stage. It is still thought this field's peak production will be around 150,000 barrels daily, but the peak is not expected until the latter part of April or the first part of May.

These wells are all drilling for the deeper sand, with bottom of holes below 6000 feet. It was rumored this week that at least two wells had drilled to 6500 feet, with the bit stopping in the oil bearing formation.

No other California field is threatening to materially increase its output.

Winkler Production Gets New Stride As West Texas Field Curb Looms

By Paul Wagner
N. P. N. STAFF WRITER

HOUSTON, March 8

WHILE the state was getting its machinery in motion for the meeting at Austin, March 10, when it hoped to bring about a curb of west Texas production, the Hendricks field of Winkler county was gaining a new stride.

From a possible production of roundly 252,000 barrels daily, at the beginning of March, the Hendricks field potential had been raised to more than 300,000 barrels. Actual production was somewhere between 135,000 and 150,000 barrels daily. Three large wells completed at the beginning of the week were largely responsible for the increased potential. All are in what is known as the northern extension of the field, where Cranfill & Reynolds, the Atlantic-Collett partnership and the Gulf Production Co. made "gusher" completions, two of them a mile and a half north of earlier production.

The first of the group was the No. 1 Hendricks of Cranfill & Reynolds, on a 10-acre lease in Sec. 33, block B-26, which flowed at the rate of 13,800 barrels, pinched, on a 12-hour test. The well made 1800 barrels in one hour, flowing wide open. Its south offset, the Atlantic-Collett No. 1, on a 160-acre lease in Sec. 40, made 1050 barrels, pinched, in 12 hours.

The Gulf's B-10 Hendricks, in Sec. 45, between these wells and earlier field development, was estimated flowing as high as 1000 barrels an hour before pinching to 100 barrels an hour.

An accompanying table, which does not include these later completions, shows the yield status of the 86 producing wells in the Winkler county field at the beginning of March.

As compared with the roundly 135,000 barrels exploited production at the beginning of the month, Winkler county crude oil shipments did not exceed about 60,000 barrels daily; roughly 43,000 barrels daily moving out through short pipeline systems to tank car loading racks and a maximum of 17,000 barrels going through the 71-mile "shuttle" line of the Atlantic Oil Producing Co., which makes deliveries to the Magnolia Petroleum Co.'s west Texas trunk system at Midland under a reciprocal contract.

The excess of production above the foregoing measured outlets had to go into storage facilities in the field. In that connection, the Southern Crude Oil Purchasing Co. is building eight additional 80,000 barrel steel storage tanks at its Wickett tank farm; Roxana Petroleum Corp. is building six more 80,000 barrel tanks in the field, giving it a total of nine; American Petroleum Co., which buys crude for tank car shipment, is building five more 80's at Pyote; and Maxwell & Turman, independent operators of Fort Worth, are building two more 80's, which will give them a total of four 80,000-barrel and one 55,000-barrel tanks.

This construction, plus tankage programs discussed on page 48 of the Feb. 22, 1928 issue of NATIONAL PETROLEUM NEWS, will give Hendricks field more than 6,000,000 barrels of steel storage without consideration of the two concrete reservoirs being built at Monahans and McCamey by the Shell Pipeline Corp.

The Shell's gathering system has been completed from the Winkler region to the McCamey district, Crane-Upton counties, and transfers of Hendricks field crude are now being made through it. Latest available shipment figures showed the Shell averaging 9,140 barrels daily loadings at Monahans, on the Texas & Pacific railroad, at the end of February; at McCamey, it was loading an average of 11,740 barrels daily for movement over the Kansas City, Mexico & Orient railroad, but this total consisted of Hendricks field crude with the exception of about 2000 barrels daily.

An official statement was recently made from the Roxana-Shell offices in St. Louis to the effect that the McCamey concrete storage would be used for Hendricks field crude. This statement set at rest fears expressed in west Texas that the Roxana-Shell interests considered drawing heavily on their large potential production in the Yates shallow field, Pecos county, where operators continue to prorate their oil in line with market outlet of about 50,000 barrels daily.

Unlike the Yates field, where daily potential production is rated at more than 1,000,000 barrels, the Winkler development area has been without other restraint than the physical limitations of its being without trunk pipeline outlet.

WEST TEXAS trunk pipe lines of the Gulf, Magnolia, Humble and the Shell will provide outlet for 175,000 barrels to general markets when the McCamey-to-Healdton system is completed, probably about Aug. 1. In the meantime, trunk pipeline shipments promise to continue at about their present average of 145,000 barrels daily.

Tank car shipments from the whole of the west Texas sulfur crude area average roundly 60,000 barrels daily, although railroad facilities are ample for the handling of as much as 140,000 barrels if refinery demand for the crude were such as to absorb that quantity of shipments. The less than half a dozen refineries operated in the local area, including the Humble's 10,000-barrel fuel topping plant at McCamey, account for about 22,500 barrels of crude demand daily.

On the basis measured, the west

Winkler County Production and Estimated Potential Production

Company	No. of wells	Open or pinched	2-29-28 Prod.	Estimated production if open
Atlantic	7	6-0 & 1-P	14,561	21,000
Cranfill & Reynolds	3	3-0 & 0-P	4,764	4,764
Gulf	6	3-0 & 3-P	12,101	15,000
Humble	6	2-0 & 4-P	15,099	20,000
Independent	10	7-0 & 3-P	17,150	32,000
Landreth	5	4-0 & 1-P	11,427	15,000
Magnolia	5	5-0 & 0-P	3,156	3,156*
Murchison	4	4-0 & 0-P	1,128	1,128
Pure	5	2-0 & 3-P	4,673	6,500†
Republic	2	2-0 & 0-P	9,743	9,743
Roxana	11	1-0 & 10-P	18,923	100,000
So. Crude	15	15-0 & 0-P	12,101	12,101
Texon	3	2-0 & 1-P	5,951	7,000
Turman	4	4-0 & 0-P	4,561	4,561
	86	60-0 & 26-P	135,338	251,953

*Two wells incomplete.
†Big well incomplete.

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National Petroleum News
1213 West 3rd St. Cleveland, Ohio

Texas sulfur crude area has been the source recently of total marketed production daily of 215,000 to 220,000 barrels. Since the middle of February the field production totals for sulfur crude grades have increased from about 280,000 barrels, daily average, to roundly 305,000 barrels daily since March 1.

Potential production in excess of actual is confined to three districts, namely, the Yates field and the Hendricks region hereinbefore discussed, and the Roberts-Settles deep lime area of southeastern Howard county, where about 10,000 barrels possible daily production has been shut in by Lockhart Bros., the Sun, Magnolia, Owen & Sloan and Schermerhorn companies.

Most of Nebraska's Oil From 16 Companies

OMAHA, March 13.—Sixteen of the 619 oil marketers in Nebraska handled more than half the gasoline sold in the state, according to a tabulation of data published by Charles M. Sutherland in a recent issue of Nioma Bulletin, organ of the Nebraska Independent Oil Men's association. His terse table follows:

16 companies sold more than 1,000,000 gallons each in 1927. They totaled 21,745,585 gallons or 11.8 cent of the state's total gallonage for the year.

49 companies sold an average of three to eight cars a month. They totaled 21,745,585 gallons or 11.8 per cent of the year's total.

71 companies sold two or three cars a month and totaled 16,409,684 gallons or 9 per cent of the year's total.

216 companies sold one or two cars a month and totaled 30,294,432 gallons or 16.5 per cent of the total.

174 companies averaged between a half and one car a month, totaling 12,779,280 gallons or 7 per cent of the total.

93 companies sold less than a half car a month on the average in 1927 and totaled 2,797,100 gallons or 1.55 per cent of the state's total for the year.

Dealers in surrounding states who bring gasoline into Nebraska by tank truck, together with jobbers in the state who sold out during the year and companies which import gasoline for their own use only aggregated 3,218,500 gallons or 1.9 per cent of the state's total.

Mr. Sutherland also reports a net gain of 102 oil jobbers in Nebraska during the year, as against a gain of 83 in 1926. In other words there are 185 oil jobbers in Nebraska whose companies are less than two years old. The 67 farmers co-operative oil companies in the state in 1927 sold 8,272,300 gallons of gasoline or 4.52 per cent of the year's gallonage.

With Throttle Wide Open

From Carlisle to London, 300 miles in 5 hours, 45 minutes is the world's record time of the Royal Scot, crack British express train.

Seldom will your customer want his car to go as fast as the Royal Scot, world's record train, but many times he will want a quick spurt of speed — a mighty leap forward as he pushes down his throttle. That's when Skelly *Refractionated* Gasoline delivers its punch. This quick speed will bring customers back again and again for Skelly *Refractionated* Gasoline. Write, wire, or phone Skelly Oil Co., El Dorado, Kans., Tulsa, Kansas City, Omaha, Minneapolis.

SKELLY *Refractionated* GASOLINE

REFINED BY THE MAKERS OF TAGOLENE MOTOR OIL

Cost Finding Methods for Marketers And How to Use Them

By Frank H. Emig

(*Article* 1)

HOW can a cost accounting or bookkeeping system be set up and followed out so that it will give me the essential facts I must know at all times about my business to allow me to direct it properly during these times of excessive competition and, therefore, narrowing margins?

This is the question that comes up many times in discussions among heads of smaller oil marketing companies. It is the question which prompted this series of articles.

Many companies, some of the small ones too, a few years ago began to realize that long margins would not always exist in merchandising oil products. They knew that, to do business on smaller margins, they must know

Form for Complete Daily Report by Service Stations, Combining

In the illustration of this form below the data written in by hand

SERVICE STATION DAILY REPORT

STATION Anyone (No. or Location) WEATHER Fair TEMP. 60° DEGREES

BULK SALES

	BALANCE	RECEIVED	TOTAL	BALANCE	SOLD	AT	NO. 1
TANK NO. 1	200	300	500	400	100	23	$23 00
TANK NO. 2	800		800	600	200	20	40 00
KEROSENE	40		40	35	5	15	75
ALCOHOL	40		40	30	10	1.00	10 00

GREASE

1#	10		10	10			
3#	6		6	5	1	60	60
5#	2		2	2			
10#	1		1	1			

COUPON BOOKS

$25.00							
10.00	5		5	4	1	10.00	10 00
5.00							

MISCELLANEOUS SALES

ALEMITING
SPRING GREASING
ALEMITE FITTING

If Accessories are Sold This Space can be used for these items.

(YOUR BRAND) MED. MOTOR OIL

PKGS.	BALANCE	RECEIVED	TOTAL	BALANCE	SOLD	AT	NO. 2
FIVES	2		2	2			
ONES	4		4	3	1	1.25	1.25
HALVES	2		2	2			
BULK GALS.	10	20	30	20	10	1.20	12.00

(YOUR BRAND) M. HEAVY MOTOR OIL

FIVES	1		1	1			
ONES	2		2	2			
HALVES	4		4	4			
BULK	25		25	23	2	1.20	2.40

(YOUR BRAND) . HEAVY MOTOR OIL

FIVES	0		0	0			
ONES	0		0	0			
HALVES	0		0	0			
BULK	20		20	20			

(YOUR BRAND) FORD (NON-CHATTER) MOTOR OIL

FIVES
ONES
HALVES
BULK

MOTOR OIL

FIVES
ONES
HALVES
BULK

Space for Oil Co. Misc. MOTOR OIL

FIVES
ONES
HALVES
BULK

(OTHER) MED. MOTOR OIL

FIVES
ONES
HALVES
BULK

(OTHER) HEAVY MOTOR OIL

FIVES
ONES
HALVES
BULK

(OTHER) FORD (NON-CHATTER) MOTOR OIL

FIVES
ONES
HALVES
BULK

DELIVERY TICKETS		
#9606	TOTAL SALES COLUMN NO. 1	$84 35
#9607	TOTAL SALES COLUMN NO. 2	15 65
	TOTAL SALES	$100 00

TOTAL GALLONS AND AMOUNT 13 $15.65

CHECKED BY JB JB.
ENTERED BY

I CERTIFY THIS REPORT CORRECT
BY A. Coleman

their costs in detail, cost for operating salesmen, carrying trucks, running service stations and so on, and for each individual salesman, truck or station.

As they began to adopt and set up such systems, no matter what they called them, they began to see where costs could be reduced, where some business could be given up as utterly unprofitable and so on. They were preparing for the period in which the oil marketing business is now engaged.

Other companies did not look so intelligently into the future, however. These companies are now faced with setting up proper accounting systems quickly and seeing that they are properly carried on in their businesses. The alternative is that they will likely be facing losses on part of their business, or perhaps the whole; but not be able to put their finger on just what is causing the loss.

An accounting system can be made as analytical as your fancy may desire. However, the main point to bear in mind is that, not only that comparative records may be lacking, but also we are interested in COSTS, so we do not want to oversystematize, which would necessitate more help with no commensurate benefit.

Nevertheless, you should know which departments of your business or selling units are making money and which are losing.

You should have an internal and external check on your selling units to know that you are getting value for everything dispensed.

You should know how your inventories are running, in comparison with sales turnover, so as not to have too much money tied up in inventory.

You should know how current assets compare with current liabilities. These are the main things every one should know about his business but each individual business has problems of their own which the system to be outlined will keep you posted on.

Later I am going into this matter of profit and loss, balance sheet or financial statements, and so on, but in this article I will give you a suitable and what I have found to be a very efficient form for recording service station sales.

This form (Fig. 1) virtually makes your station salesman his own auditor, eliminating the necessity of a daily check on his station.

Of course it is conceded that you are familiar with the necessity of having your station tanks properly gauged or a meter on the pump. Either is satisfactory—some have both—so much the better.

Always be particular about checking a new station salesman into his station. When he starts out some concerns invariably overlook this feature, which causes misunderstanding later. Be sure to instruct the new men or the old ones if you are just adopting this report to do just exactly what is expected of them.

Inventory and Sales Record.

is given as an example.

DATE Jan. 15-1928

CREDIT SALES

TICKET NO.	NAME	√	AMOUNT
15968	John Brown		$ 7 00
15970	George Smith		10 00
	TOTAL		17 00

COLLECTIONS

15969	Frank Jones		$ 17 00
	TOTAL		17 00

RETURNS—ALLOWANCES

Oil drain 6 qts	30
" " 7 qts	35
TOTAL	65

PAID OUT AND EXPENSE

	TOTAL		

COUPONS REDEEMED

TAPE COUPONS		√	
100	1		1 50
50			1 00
25	4		50
10	5		50
5			
2			
1			
TOTAL			$ 3 50

STATION CHECKED

BY

CASH ACCOUNT

TOTAL SALES		$ 100 00
CREDIT SALES		17 00
CASH SALES		88 00
COLLECTIONS		17 00
TOTAL CASH		100 00
COUPONS	3 50	
EXPENSE		
ALLOWANCES	65	
TOTAL		4 15
NET CASH		$ 95 85

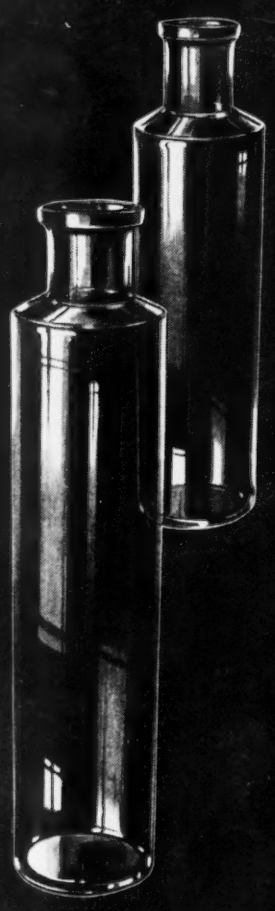
LACK of instruction is without doubt the cause of most dissatisfaction and misunderstanding between employe and employer. Stress it. Go over it. Give out printed instruction sheets of what to do and how to do it according to your desires, and never allow a deviation from it without your written instruction.

Be certain it's written out, as you will often unintentionally instruct one salesman different from another which will cause misunderstanding and friction. Remember you are running a football team of business and everyone must get the same signals in order to successfully execute the play, and gain any ground.

This station report is a daily, perpetual inventory of each of your company owned and operated service stations. This report is practically self explanatory. To the balances carried forward from the day before you add all receipts of each product. The old procedure of keeping record of each sale made is too slow for this day and age. So, when one salesman checks out to another, they take an actual inventory of remaining stock and place the result in the new balance column.

The difference between the new balance and the total is the amount sold by the salesman relieved and must be accompanied by sufficient cash, coupons or credit sale tickets to cover

Sample OIL Bottles



Made of the finest perfume glass to assure strength and clarity . . . Ground and polished bottoms add further protection against distortion and reveal true color values . . . Well designed necks hold the cork with bulldog grip.

Sizes 2—4—8 ozs.
Sample on request.

Illinois Glass Co.
Alton Ill.
ESTABLISHED 1873

No. 750 LUBATORY SERVICE

JOB CARD

Date.....

NAME.....

ADDRESS.....

MAKE OF CAR.....

LICENSE No..... STYLE.....

Check Here	LUBATORY SERVICE	Amount
.....	Complete Greasing.....	.....
.....	Partial Greasing.....	.....
.....	Spring Spray.....	.....
.....	Transmission.....	.....
.....	Differential.....	.....
.....	Wheel Bearings.....	.....
	Oil Changed Qts Kind	
	LAUNDRY SERVICE	
.....	Washing.....	.....
.....	Polishing.....	.....
.....	Simonizing.....	.....
.....	Dressing Top.....	.....
	TIRE SERVICE & MISC.	
.....	Tire Change.....	.....
.....	Tube Repair.....	.....
.....	Tire Boot.....	.....
.....	Light Bulbs No.....	.....
	TOTAL AMOUNT	
.....	.....	$.....

(If Cash paid for this job—Salesman will sign and give Customer this receipt. If charged Salesman and Customer sign and do not detach from job card.)

No. 750 **CUSTOMERS RECEIPT**

Amount Paid to Salesman..... $.....

Amount Charged to Customer..... $.....

....

Salesman Customer

No. 750

CLAIM CHECK

YOUR OIL COMPANY

Anywhere, U. S. A.

(Tear off for customer on any work left to be called for later)

Fig. 2—Form of serially numbered cards, with perforated claim check for customer, for use by service stations offering other services than selling gasoline and changing oil.

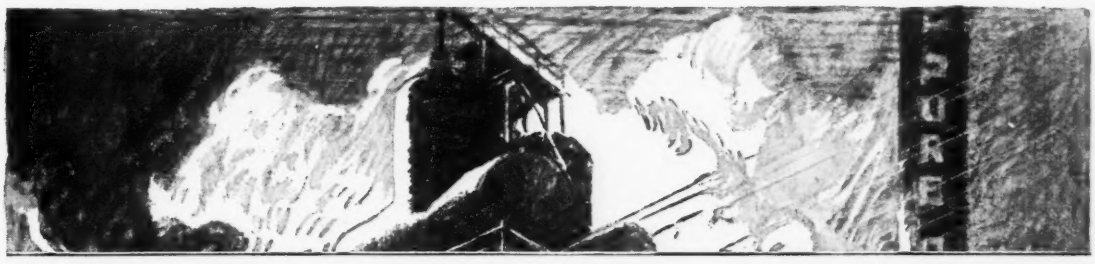
the total. The new salesman on duty, having seen and verified the inventory, carries the balances forward and is responsible until relieved when the same procedure is followed.

This is satisfactory for stations which handle their own oil drains, greasing and so on. For the newer super-stations I would suggest this report or similar for the gasoline and quart oil sales at the station, but would have a separate report card for the greasing, alemiting and washing service. This could be handled on serially numbered cards as shown in (Fig. 2).

At the end of the day the foreman in charge could make up a consolidated report for all service cards used. These cards would be turned in with the report showing total business done and receipts, to be used by the follow-up clerk on greasing, etc. If the card be perforated at the bottom it could be used for a cash receipt if necessary but, if charged by the customer, the salesman would leave it attached.

The thing you are all interested in is the amount you get from each unit or department and the cost to operate that unit or department and the resultant profit therefrom. Therefore these facts are necessary and should be collected in the best and most efficient way possible, with the least amount of overhead expense. There are many other methods, many of them well tried, proven methods. This is intended only to furnish you with one in case you haven't any at all or, perhaps to improve by comparison the one you already have in operation.

(To be continued)



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IF you were to refine your *own* products, you could use no greater care than Pure Oil uses in refining them *for* you.

And Pure Oil not only has the will to refine well — it has the way. Great modern refineries containing only the most approved equipment . . . expert refining knowledge — the result of thirty years' experience! This company makes all petroleum products as only an organization with such vast facilities and experience *can* make them.

And because The Pure Oil Company controls *every* step in producing and refining its products, you are assured of *uniform* quality . . . delivery on the dot.

Mr. Jobber: Pure Oil has a complete line of quality petroleum products. We're ready to ship what you want when you want it. Just phone, write or wire nearest Sales Office.

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Muskogee, Okla.
Smith's Bluff, Texas

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New York
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Pittsburgh
Columbus, O.
Minneapolis
Tulsa, Okla.
Charleston, W. Va.
Atlanta, Ga.
Beaumont, Tex.
Pensacola, Fla.

Painting Basements To Se

Fuel Oil Corp. at Detroit Has Built a Domestic Heating Oil Business Requiring 750,000 Gallon Storage

Written by H. E. HEREN

DETROIT, March 8

THE Fuel Oil Corp. less than five years ago only a business venture hazily shaped in the thoughts of one man; today, a leader recognized in the middle west in its chosen field, burning oils. Here is a success which has been achieved through leadership, organization and merchandising.

The Fuel Oil Corp. was started by D. R. Mitchell almost as a one man company. He saw the opportunity in the handling of oils for burning at a time when there were about 200 burner installations in Detroit.

For the first two years his company's activity was restricted entirely to truck deliveries. Then a carload department was added, and the organization of the Fuel Oil Corp. completed as it stands today, with Mr. Mitchell as president and acting head.

The company has prospered by keeping its merchandising methods one step ahead of today's job. The first step taken was not to establish a list of customers, but to sell the oil burner sales agencies,—which is the source of new business,—that the service to be rendered by the newcomer was superior to that afforded elsewhere.

Easier oil sales. These were directed toward the Fuel Oil Corp. in the natural course of events in repayment for the many courtesies extended to the burner man at a time when oil burning was in its infancy and the dealers in equipment were pioneering in the new field.

The company inaugurated a "keep fill" system—which fitted nicely with "automatic heat" arguments. The customers' storage tanks were supplied with oil without orders or attention from the user. The oil delivered was sold under a guarantee that it would work—or the owner could rely upon the company to correct his troubles, whether oil or burner.

This development called for both a chemical laboratory and an engineering department, both of which are being used to give service to sales agencies as well as the customers.

Coupon books were sold in the summer to protect the user against the winter advance in price.

A subsidiary, the Fuel Oil Service Co. was added to take over the burner service of a bankrupt distributor. Now both service and installation work are handled for a half dozen high grade burners.

This department points the way for the next step in development, that of complete heating service, cleaning furnaces, blowing boilers, repairing boiler covering, correcting draft conditions and heightening efficiency in general of the heating plant.

Even the painting of the cellar is included. This idea has been partially developed and will be used by the oil sales department in the building of business for next season.

Plenty of side issues, but the job of getting oil from company storage to customer storage has not been slighted. Each Sunday, keep-fill tickets are made out for the ensuing week, and on Monday morning the

One of the Fuel Oil Corp.'s 2,000-gallon trucks, delivering oil at a Detroit home. This is one of the latest trucks of the company's fleet and covers a wide radius from the plant in delivering domestic burner oils

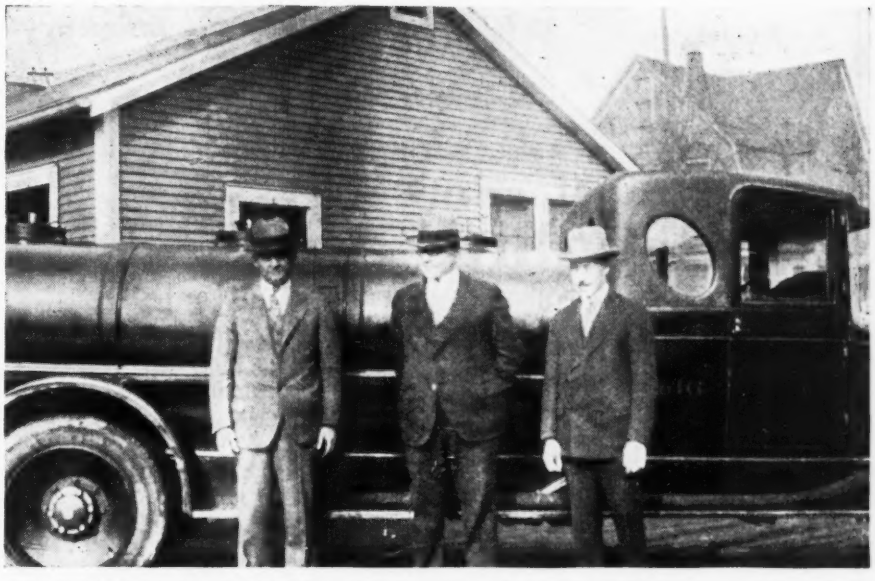
Sell Home Burner Oils

Keeping Its Merchandising and Servicing Ahead of the Routine Task of Delivering Goods

Exclusively for National Petroleum News

company knows where 75 per cent of its deliveries are to be made for the week, with no peak and no idleness for the truck equipment whatever the weather. Because rush orders have virtually been eliminated, the company sends out during a siege of cold weather, notices offering two hour service to those accounts not on their books.

All keep-fill customers cards for oil during the coming week will be marked one, two, or three. No. 1 is for delivery on Monday or Tuesday; No. 2, delivery on Wednesday or Thursday; No. 3, for Friday or Saturday. Capacity of the tank, time of last delivery, general weather conditions for the past week, and the current forecast are considered in determining whether a customer gets a fill this week or goes over until the next Sunday.



Three officials of the Fuel Oil Corp. On the left is George E. Baldwin, vice-president and in charge of the tank car sales department. W. E. Remter, treasurer, is in the center. On the right is H. E. Heren, secretary, who has charge of the merchandising domestic burner oils

THE fleet of trucks is classified roughly into three divisions, approximately 600 gallon capacity, 1000 gallon and larger, and 2000 gallon capacity.

Truck drivers, above the average, are available through the paying of bonuses and good wages. Pay is on an hourly basis and above the general wage scale. If a driver is on time and does not spill oil on lawns or have an accident with his truck, he receives $3 weekly bonus. Half the bonus is paid when the driver himself reports the trouble.

All complaints of oil spilled at houses are blocked by calling the customer first, not waiting for him to take action. Each Christmas the men receive $5 for each year's service.

As the dull summer season approaches the drivers are of necessity laid off. Another side light on the company policies, is the method of letting the men out in the spring. In the past the drivers have been notified that the winter's work is over and this will be their final day on the trucks. Now the men will be given one week's pay when laid off. This is no additional expense to the company, as monthly bonuses for good work have been eliminated and that fund will be used to soften the laying off process. The good men are picked up again in the fall.

The best drivers have the big trucks, as they serve the biggest and most profitable accounts. These drivers can, if an argument arises, handle a customer as well as a salesman.

"Load into the dome" is the instruction given to truck drivers. Good measure is a desired quality on the dumps. No driver has ever been caught stealing.

If a customer complains about his delivery, he is right the first time. If the complaints continue and seem unjust, the customer is dropped. Most complaints come during extreme cold weather when the tank seems to empty too fast on account of the increased consumption. Day and night service is maintained seven days a week.

COUPON books were brought out four years ago. The books are sold during the summer months at current prices for fuel delivery in the winter. Last summer coupon sales amounted to $30,000.00 by June 15.

According to the company, financing should not be done with coupon books. The risk is too great for such a venture. Summer retail prices are based on the refinery market so the company can fill its storage tanks with sufficient oil to cover that sold by coupon books. Customers are given the benefit of any price reductions in the winter. They are protected against any advance, as the coupons are sold at a definite price. Adjustments that have been made due to a drop in market prices have been made through coupons as a matter of simplified accounting.

Coupon sales are not pushed extensively, as the element of risk is involved. But they are available to any customer who prefers to do business via this method.

The subsidiary, Fuel Oil Service Co., was organized last year, the officers being the same for both companies. Mr. Mitchell is president; George E. Baldwin, vice-president; L. F. Ruwe, vice-president; Hubert E. Heren, secretary; W. E. Remter, treasurer.

The company functions as the exclusive source of authorized service and factory parts for about 1200 burners of five different makes.

Operating a service company took the curse off one difficulty. Formerly a distributor could lay any trouble to the oil and advise the owner to change source of supply. While the old oil was being pumped out, the distributor could adjust the burner and get away with placing the blame on the first oil company.

EVEN the competitor is protected now for the service man on the job must get an okeh from the laboratory before blame can be attached to the other fellow's product. In accord with the policies of the parent company, the purpose of the service man is to determine causes of trouble, not merely to make repairs.

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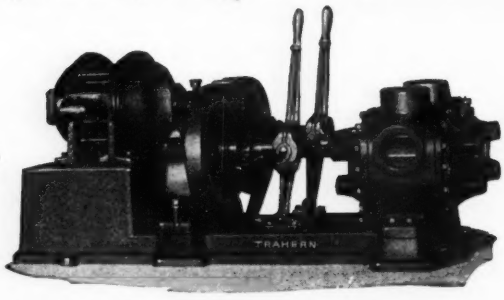
TRAHERN PUMPS

REG. U.S. PAT. OFF.

Large Capacity



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Gasoline and Oil

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1. TRAHERN Pumps are built for service.
2. A size for every installation.
3. Highest quality on the market.
4. Handle liquids of any viscosity.
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6. Have large capacity.
7. Operate at low speed.
8. Are practically indestructible.
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to acquire a working technical knowledge of the selection, application and use of lubricants, by ordering for each one a copy of the PRACTICE OF LUBRICATION by T. C. Thomsen.

It discusses the origin, nature and testing of lubricants and every phase of lubrication engineering.

It is $6 a copy. Make your check payable to—

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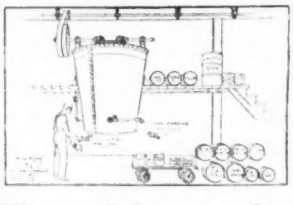

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We can help you. Our formulas, and over 40 years experience as Grease and equipment specialists

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Manufacturers of
COMPOUNDING KETTLES

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Los Angeles, Calif.

Lake Bluff, Ill.

Through this procedure, service calls have been cut to 70 to 80 a week, as against triple that number a year ago.

In the office a service man's name is posted in red ink where a follow-up call had to be made on his work. The cost of the repeat call is on the house. There is a daily report and summary for the week. Report on the activities of each man, showing number of calls made, amount of time spent in and out of the office or repair shop, and the financial results of each day's work.

Elimination of waste time and the leveling of service demands was accomplished by monthly inspections on the burners using the parent company as a source of oil supply. This inspection plus thorough overhaul of all equipment during the summer enabled the fall to slip by with a total absence of the wild scramble expected of a service company when the first chill days bring cheer to the fuel interests.

Installation work is handled as an adjunct to the service department under an installation superintendent, crews of two or three men doing the work. Electrical work, brick work, pipe work, etc., is all part of the day's work for any of the dozen service men. Everything but the digging of the hole for outside storage, which is handled by cheaper labor who also act as helpers to the service men on their installation work. So far the men have not been instructed to sell oil along with their routine work. That will come next winter. This year has been spent in building morale. The men will be led, not pushed into selling oil.

Direct by mail sales letters constitutes the main sales effort. Other methods have been tried. One year, six men were on the street, but the expense was too great for the results obtained. Prospective customers are not in the mood to buy in the spring and early summer. Too many calls are necessary to find the buyer at home. Profit per customer is small and does not warrant personal sales work.

Letters and follow-ups are sent out during the year. August marks the beginning of the fall selling season which continues through September and October. Only the large user is now followed up by salesmen.

One inducement to buy in the summer time, is that of cleaning out the tank, giving full credit for all oil removed and refilling with the invoice dated Sept. 1, if the customer prefers a future dating and loss of the customary 1 per cent.

The selling staff functions in various managerial capacities during the off-selling season. The burden of their selling talk is advice to the prospect to buy on the best combination of quality, service and price. There are no other points to be considered, and

they are taught to boast of being always the high price artist if there is any price differential, as there always has been on the smaller storages.

The price to the customer has always been fixed in accordance with the size storage rather than the size of the individual delivery, and though the larger size storage has been favored with the current market prices, the smaller storages have been consistently penalized with a prohibitive price attached to the long hose or carry-in dump. Mr. Heren, the secretary, is responsible for the coordinated activities of the truck sales, delivery and service departments.

In addition to the domestic heating oil business, the company sells industrial oils in carload lots in Detroit and surrounding territory of Michigan, Ohio and Indiana.

Mr. Baldwin, vice president, is in charge of this department. The department differs from most oil jobbers inasmuch as it takes refinery total outputs. There is an appreciable difference for a shipping schedule is given with the placement of the order, perhaps covering a year in advance.

The sales force and traffic department divert the oil while en route to the carload account. Always Mr. Baldwin has the use of the 750,000 storage of the truck department, plus sidings which are good for an extra 15 cars to help in out-guessing the possibility of demurrage.

Surely Mr. Baldwin's salesmen have an argument to interest the purchasing agent. "Need oil quick? How about tomorrow, or the next day?" What's the difference if a car requires 10 to 14 days rolling time from the fields. There's always some en route, and the contract customer can be supplied without waiting till tomorrow in cases of necessity, and without extra cost to his outfit via the truck load department, provided only that the shortage was due to no fault of his, otherwise a 1 cent a gallon haulage charge is added to the carload price to defray the hauling expense. But like the truck load department marketing has not been the only problem to be battled.

The possibility of future high costs has had its influence on development. Through the engineering department, under the direction of Mr. Ruwe the equipment of a number of industrial plants have been changed over from light to heavy oils, with saving of as high as $300 per day to an individual organization.

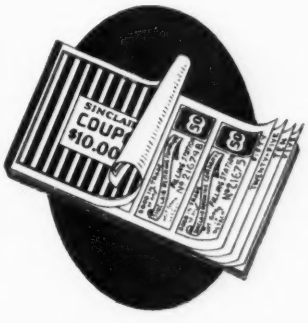
This engineering work has consistently followed the trend of educational work tending toward the burning of heavy cracked fuels as a substitute for straight run products. But, in the meantime, business is business, and all varieties of oil for burning can be brought through the carload department.

The plant which serves as a cushion

A. H. Sus, Manager of the
SINCLAIR REFINING COMPANY
Central District
summarizes why his company prefers
RAND McNALLY COUPON BOOKS

"WE find Rand McNally Coupon Books singularly adapted to our business," writes Mr. Sus.

"Our bookkeeping and accounting at service stations are materially expedited thereby."



Hundreds of coupon book users, both large and small, have found that Rand McNally & Company gives them better, quicker service.

Perfect printing, guaranteed numbering, certified count, special packaging and a wide variety of styles to choose from, are but a few of the many advantages.

Rand McNally & Company are *specialists* in coupon book and ticket printing of every description. They have the experience, skilled workers and the equipment to give you dependable, good looking work at competitively correct prices. Be sure to get samples and prices in quantity before placing your next order.

Wire or write today for complete information

RAND McNALLY & COMPANY

Dept. S-9

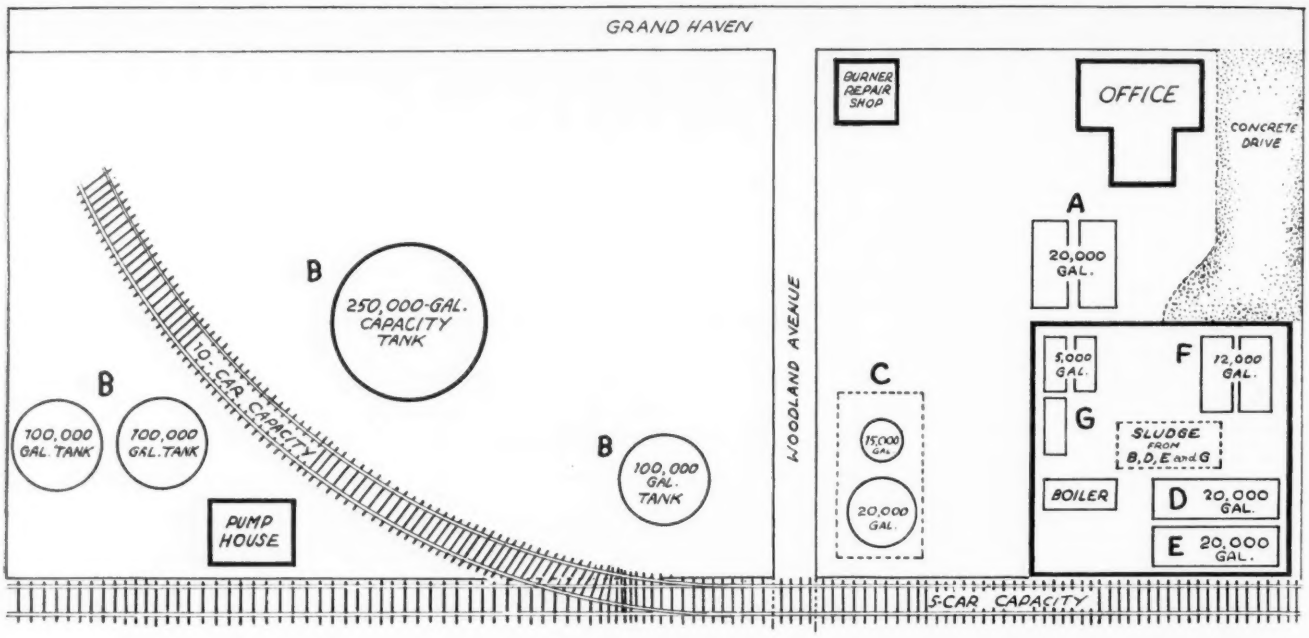
270 Madison Avenue, New York
536 S. Clark Street, Chicago
559 Mission Street, San Francisco

There is a constant market in used equipment

Take advantage of the savings possible by buying what you need or selling what you don't need.

An advertisement in our classified section costs only $4 an inch with a border and display heading. Without a border 10 cents a word, minimum charge $3.

Tell them your needs in next week's issue.



Layout of the Fuel Oil Corp.'s plant and storage tanks. The two tanks (A) are used for compounding 24-26 oil. Tank (C) and the nearest tank lettered (B) are for 24-26 fuel oil; other tanks lettered (B) are for light oil storage. Tank (D) is for 14-16 fuel and tanks (E) for 9-11 fuel oil. (F) indicates two overhead tanks from which light oils are delivered to tank trucks. (G) indicates tanks for compounding Diesel blends or special oils. The sludge tank buried beneath the plant floor receives from the outside 24-26 storage tanks and from tanks (D, E, and G)

for the shipping schedule arranged months in advance and which makes the sale of coupon books and truck deliveries a possibility is along the Grand Trunk Railroad at the end of Woodland ave. in Hamtramck, a section of Detroit.

A layout of the plant is given in the accompanying illustration. The ground space is approximately 200 by 750 feet, with some land available for expansion. In one corner is a one story frame building 75 by 120 feet housing some tanks, loading rack and a boiler. The office is a one-story frame structure fronting Grand Haven street.

Along a 10 car railroad spur in the corner opposite the building are three upright tanks of 450,000 gallon capacity, for light oil storage. At the back of the building is a spur for five tank cars. Near the building and spur is storage for 24-26 fuel oil; an upright tank of 100,000 gallons; above a buried 30,000 gallon tank are two uprights of 15,000 and 20,000 each.

In front of the plant building and back of the office are two 20,000 tanks for compounding. Along the railroad and inside the building are two 20,000 gallon tanks for heavy oil. Next is a 150 horsepower return tubular boiler with two Simplex gun type oil burners.

At the front of the building above the drive are two 12,000 gallon tanks overhead for loading trucks by gravity; opposite are three 5,000 gallon tanks for blending; all tanks are equipped with swing lines.

Two pumping units are used, one at the light oil storage, and one in the main plant building. Pump lines are manifolded so that oil can be moved from any one tank to any other. Distillate lines are painted red, gas oil green, and heavy oil lines black to help the plant men avoid errors.

The boiler oil burners are fueled from a tank underneath the building floor in which is drawn the sludge from the heavy oil tanks and oils pumped from customers' storage.

The major portion of the plant work is done at night. The cars are unloaded. Oil is heated for the day force, and trucks are loaded for the first morning delivery so there will be no delay for the drivers.

All incoming cars are tested before unloading for gravity, flash, fire, viscosity, sediment, water and sulfur. A distillation test is taken on all distillates. Each morning the laboratory takes a sample from all the storage tanks and a complete inventory. The oils regularly stocked are 9-11, 14-16, 22-26, 24-26, 30-32, 34-36, and 38-40 gravity.

UNDER Mr. Ruwe's supervision also comes the maintenance of the 30 odd pieces of automotive equipment. All repair and overhaul work is done by company mechanics, with the minor repairs being made at night.

Every summer the trucks receive a fresh coat of red paint through a DeVilbiss spraying system operated by a plant mechanic. Steelcote is used now. About half of the truck fleet are equipped with Viking pumps driven from the transmission being used in a dual capacity, to hasten the unloading of the truck tank, and to suck out the contents of the storage in need of cleaning.

Under the company's supervision and man-power, a similar plant was built at Fort Wayne, Indiana for a coal company. Just another side line which fitted into the logical uses of the Fuel Oil Corporation's abilities is the supplying of Uncle Sam's rather gigantic requirements for furnace oil used in combating the corn borer infestation in Michigan.

DENVER, Colo.—The Western Clear Vision Sales Co. with headquarters here is selling the Davis Master Oil Fountain, manufactured by Davis & Son Mfg. Co. It is made in three types, the four and eight tube and the self-container glass cylinders show the various oils in their true colors. At night it is illuminated by the Davis Glo-light which is held by an insert tube in the center of the large tube.

These new lighting process lamps give three times the length of life because of low temperature, the company claims. The lamp filaments are not subject to jar, due to the inner tube.

A feature of the Davis fountain is its double side draw from the same compartment which allows two attendants to serve two cars simultaneously.

Oil storage is taken care of through use of the Davis 4-in-1 compartment tanks designed especially to simplify the installation of master oil fountains. Heavy I. C. C. shipping drums can also be used as oil containers in various installations. Air pressure regulator, air strainer, water trap, safety valve and gage are furnished to control the air required to lift oil, 5 to 15 pounds.

Standard of California Extends Texas Work

HOUSTON, March 8.—Subsidiaries of the Standard Oil Co. of California are going ahead with recently announced plans for the building of a refinery at El Paso and the construction of an 8-inch pipeline from the Yates field, Pecos county, to that point.

A first unit of the Pasotex Refining Co. plant, which will have 5000 barrels daily capacity, is already under way.

Surveying of right-of-way for the pipe line, which will be nearly 275 miles long, is also progressing. Construction plans have not been announced.

The Standard of California operates in Texas producing fields through its Rocky Mountain subsidiary, the California Co., with headquarters at Colorado, Mitchell county.

Shipments from Los Angeles Declined in February

LOS ANGELES, March 9.—Tankers leaving Los Angeles harbor during February, for points outside of Pacific coast trade territory, carried 4,650,422 barrels of petroleum products, or a daily average of 153,463 barrels. This is a decline of 3,933 barrels compared with January's total of 4,878,287 barrels, or a daily average of 157,396 barrels.

More than half the total movement in February went to Pacific foreign points, which drew 281,496 barrels of crude, 1,502,807 barrels of fuel, 158,936 barrels of gasoline, 383,893 barrels of kerosene and 156,349 barrels of diesel oil. Products going to Atlantic domestic included 421,526 barrels of crude, 77,623 barrels of fuel, 462,238 barrels of gasoline and all the distillate, amounting to 92,612 barrels. Tankers to Atlantic foreign carried 714,706 barrels of fuel, 331,269 barrels of gasoline and 66,967 barrels of diesel oil.

Seeks To Stop Gasoline Refunds

RICHMOND, Va., March 9.—The elimination of all exemptions in the Virginia gasoline tax is seen in the favorable action taken by the house finance committee recently on the Hall-Parker bill. This bill, it is estimated, would save the state $400,000 yearly in refunds now made on gasoline used in farm machinery, cleaning establishments, launches, and for other than motor vehicle operation.

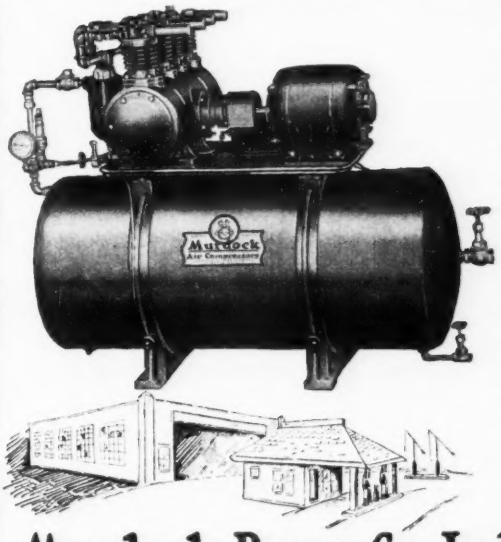
The unconstitutionality of the Illinois gasoline tax law is cited by the backers of the bill as applicable to this particular bill.

Murdock Air Compressors

Neater ~ Compact ~ Super efficient

FOR MODERN SERVICE STATIONS

The handsome Murdock is every bit as sturdy and business-like as it looks. Direct drive assures a maximum of pressure with the least possible cost of current.



The Murdock AC-12 (illustrated at the left) gives plenty of air for the present-day needs of the super-service station.

Specifications

Capacity, 12 cubic feet of air per minute.
Motor, 2 h. p.
80-gallon storage tank.
200 pounds maximum working pressure.
4 cylinders—smoother, quieter, more dependable operation.

Jobbers and Dealers — Write for prices and discounts.

Murdock Pump Co. Indianapolis, U. S. A.

"S. O. S."
Your Source Of Supply

on

100% Pure Processed Vegetable Castor Oil.

Castor Essence. Castor Base.

Mix them with any Motor Oil.
Will not gum or separate.

Castor Oil Motor Oils

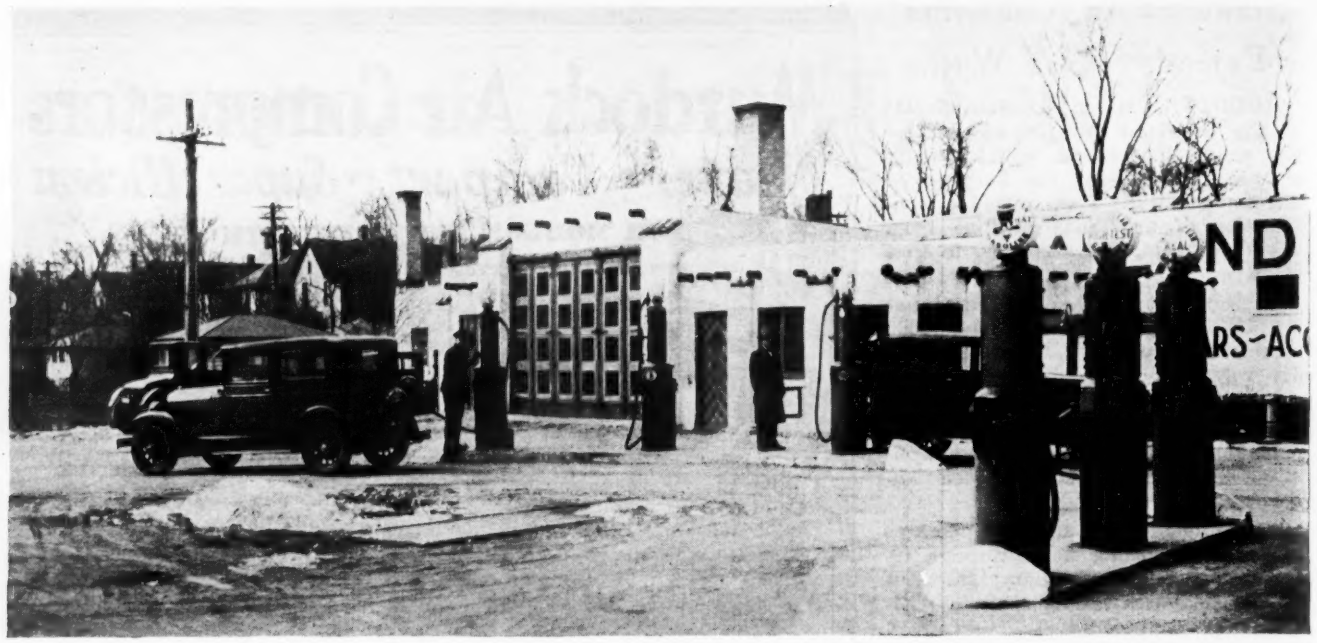
Outwear straight petroleum Lubricating Oils, make Motors run cooler and last Longer.
We also manufacture Zero Lard Oil and Sulphur Base.

Why not supply your Trade with the best

SEYMOUR-HOWARD CORPORATION

Manufacturing Chemists

601 West 53rd Street Chicago, Illinois



Inter-Ocean Sales Corp., just completed this station at La Grange, Ill. The design is that of a Spanish fort. It is a complete lubrication station, the large double doors providing access to the inclosed greasing department

He Puts New Stations on Black Side Of Ledger in 3 Months

"PERSONAL contacts get business. They are best sales stimulants an Independent oil jobber can have, especially in small towns. We ask our friends for their business and get it. We ask them to help us get business from other people and they do it. Our employes make personal appeals to their friends for patronage and we pay them for that very service."

The foregoing remarks were made by Bryan S. Reid, president of the Inter Ocean Sales Corp., Chicago.

Mr. Reid has one filling station in Chicago but he markets in 14 suburbs west of the city with Downer's Grove his most westerly outpost.

He specializes on small towns and prefers them, although competition is just as keen in Chicago suburbs as in the city.

"Independent oil jobbers are about through telling the public they can give better merchandise and better service than the big companies, at the same price," said Mr. Reid. The story does not sound reasonable. But, if the Independent's merchandise is equally satisfactory and his service is just as pleasing as that of the big companies, he can get business on a basis of personal solicitation.

"That is his stronghold and he has a right to use it.

"When we employ a filling station man we pick one who can bring business into his station with his own personality. We have some service station men we pay more than our traveling salesmen receive. Ten dollars above union scale is the lowest wage we offer a new man on a filling station.

"Our selling investment is in men and we do not hesitate to pay them as much as $200 a month when their business getting ability justifies it.

"In Berwin we have a couple of young chaps who, I believe, are known personally to a majority of the motorists in town. I can't call their last names this minute but their given names are Sam and Henry.

"The other day a man drove into their place and while his car was being serviced he got out and loitered around a while. One of the boys asked him if there was any special thing he wanted and he said, 'No. I'm satisfied. I just came around here to look at the establishment and see why my daughters won't buy gas anywhere else. I was afraid it was a bunch of shieks attracted them; but their story seems to check up pretty well.'

"We employed a barber and put him in charge of our station in Congress Park. He was one of the best known and generally liked fellows in town. That's why we wanted him.

"In La Grange we got a telephone repair man for the same reason. There are few houses in town he has not been inside of. He knows nearly everybody and they like him.

"Ordinarily service station men ought to be active, pleasant and courteous but, aside from that, there is no unfailing rule. That is how the small Independent business man can hold his advantage. He can hand-pick his employes, selecting the right man for the place and correct his mistakes in short order when he makes them.

"I do not believe our man in the village of Argo could get a job with one of the big companies. He is probably over their age limit. But he is the right man in the right place for us.

"His name is Anthony Frisbie but everybody calls him 'Dad'. One of his most cherished possessions is a blood-stained linen, turnover collar, cut clear through both sides with a razor. The slit is nearly four inches long. Dad had it on one night a few months ago when two negroes came to get his money. And, if you will believe me, they did not get it!

"IT WAS in Dad's pocket and he refused to hand it over. He is not much over five feet high and he is more than 50 years old, but he put up a fight. They tried to cut his throat but the collar saved his life.

"The interesting part of the story

developed the next morning. Argo is nearly one-third colored, and their trade is a considerable share of local business. During the forenoon three different negro men came to Dad at the station and told him about the same story.

"In substance it was, 'Mr. Frisbie, if you will just tell us who it was that tried to rob you, we will take care of them. You won't have to bother about prosecuting them.'

"Dad Frisbie stands in with all the people in that town, black and white. He has his own set ideas about things and runs that station like it belonged to him. He would not fit into any organization.

"We have to fit our organization around him, but it pays to make an exception of him. We even have to keep a separate set of books for him.

"If a colored child came to 'Dad' with a gallon can and a dime and wanted kerosene, which is selling for 14 cents, he would fill the can. Then he would take 2 cents out of his own pocket and send us 12 cents with request that the company bear half the loss.

"Naturally he can't report the operations of his station on our regular blanks, so we let him write us a letter instead.

"He will not wear our caps and coveralls with lettering on them, because he says he 'won't be a walking advertisement for anybody', so he comes to work in a white collar and tie and a derby hat. That is all right with us. He makes us money. His station was charged off long ago.

"He opens up at 7 o'clock in the morning but there is no telling when he will close.

"There is a moving picture show at the Opera House across the street three times a week and Dad is always there when it is over (about 10:30 p. m.) to serve belated motorists if they need any gasoline.

"Of course Dad is an exception to almost everything, but he fits into the policy of the Inter Ocean Sales Corp. His personality gets the business in the town where he lives and works. In Oak Park it is another sort of a story. Oak Park is one of Chicago's fashionable suburbs, a village of 40,000, and a lot of community spirit and pride.

"With a village form of government it has only a few public officials, so it takes quite a following to get elected.

"In that town we employ the son of one of the officials, a popular young man with social recognition. That is one of our smartest stations. We have a contract with a local florist to put a fresh plant in the window every week.

"Our whole merchandising policy is to go after the local trade. Experience has taught us that 85 per

The Facilities

of Three Well Equipped

Wackman Steel Drum Plants

Now Available

AN ANNOUNCEMENT!

INSPIRED by the Good Will of our Customers, and established upon the foundation of our Confidence, we feel our usefulness to the Industry becomes an incentive to our progress too great to ignore.

That is why the original idea on which this Company was founded has become more and more a Conviction—a reason which has enabled us to become outstanding in our usefulness to the Oil Industry.

That is why at this time to serve our Customers in the Middle West better, and extend them the outstanding advantages of centralized control, closely defined geographic location, and assurance of real Service, we announce the opening of our New Steel Barrel Plant—

FIFTEENTH AND CHARLOTTE STREETS
NORTH KANSAS CITY, MO.

Producing
STEEL CONTAINERS, OIL AND GREASE DRUMS
Assuring
QUALITY - - - - - PRICE - - - - - SHIPPING SATISFACTION

WACKMAN WELDED WARE COMPANY

St. Louis **Houston** **No. Kansas City**

Address our Nearest Plant

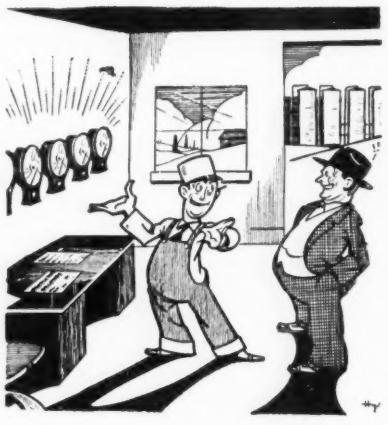
"Burning Liquid Fuel"

LEARN real facts which have never been published before on the subject of burning liquid fuel, by W. N. Best, the recognized authority.

Send your order and check for $4 to—

National Petroleum News
1213 W. 3rd Street Cleveland, Ohio

Billions of Bubbles



"Yep—production is sure jumping"

"Since we put in those Campbell Oil-Froth Absorbers our gasoline production has been climbing to beat the band—and from the same amount of natural gas. Seems uncanny the way this plant is turning out gasoline. Believe me, Campbells do the stuff!"

CAMEL-DRY GAS

J. A. Campbell
Natural Gas Engineer
Consulting—Designing—Constructing
P. O. Box 669 LONG BEACH, CALIF.

Campbell
Oil-Froth Absorbers

The Business of Oil Production

published by Johnson, Huntley and Somers, makes it possible for the beginner in the oil-producing business to obtain a working knowledge of the best methods and of their application.

The man who is experienced will find that it will answer practically any question that may arise on the business side of his enterprise.

The cost of this book is $3.50 and may be obtained by sending your check to—

National Petroleum News. 1213 W. 3rd St., Cleveland, O.

A type of men employed by Inter Ocean Sales Corp. Louis Stovenger, in charge of the La Grange station is a salesman. The management believes no local institution or nearby chain store in La Grange is managed by a better merchant with wider acquaintance

cent of all filling station gallonage is local and 15 transient.

"We hire the men who can get that local gallonage. We know they are doing it. It is proven in a number of ways but it is sufficient to say that August is our poorest month for gross gallonage. August is usually a peak month for gasoline consumption nationally, but not with us.

"The reason is that our customers take vacations in August which is the hottest month around Chicago. Our regular trade is not here and we don't make it up on transient business. Besides, we give our employes August vacations and that makes it worse, because we lose a certain amount of trade when our regular men are removed from the stations, even for two weeks.

"By the personal appeal method of getting business a station can be brought up to its approximate maximum business in short time.

"We have opened several new stations since the industry has been considered over-built and we have been able to put every one of them on the black side of the ledger in

less than three months. We have heard complaints about the long hard struggle necessary to make a new filling station a going proposition, but it has never hurt the Inter Ocean Sales Corp.

"When we open a new station in a town we call on our friends there unhesitatingly. We ask the building contractor who builds the station, the banker where we deposit the company funds and any other influential business men we know, to write letters to their friends recommending our products.

"Of course all they do is dictate the letter and check the names of their personal friends in the local telephone book. We take their stationery and get out the letters. We have found that it brings us business.

"Our filling station men in such a town are at home there, but they have just started to work for us. Maybe we have had them in some other town learning the work for a few weeks but when the new station opens up in their home town they are sent there to work. They immediately start calling on their friends for business.

"When they meet a motoring acquaintance on the street they say, 'I'm running this new Inter Ocean filling station over here now and I want you to come around and do some business with me. We handle good stuff and I want to make a good showing to start off with,' and it works.

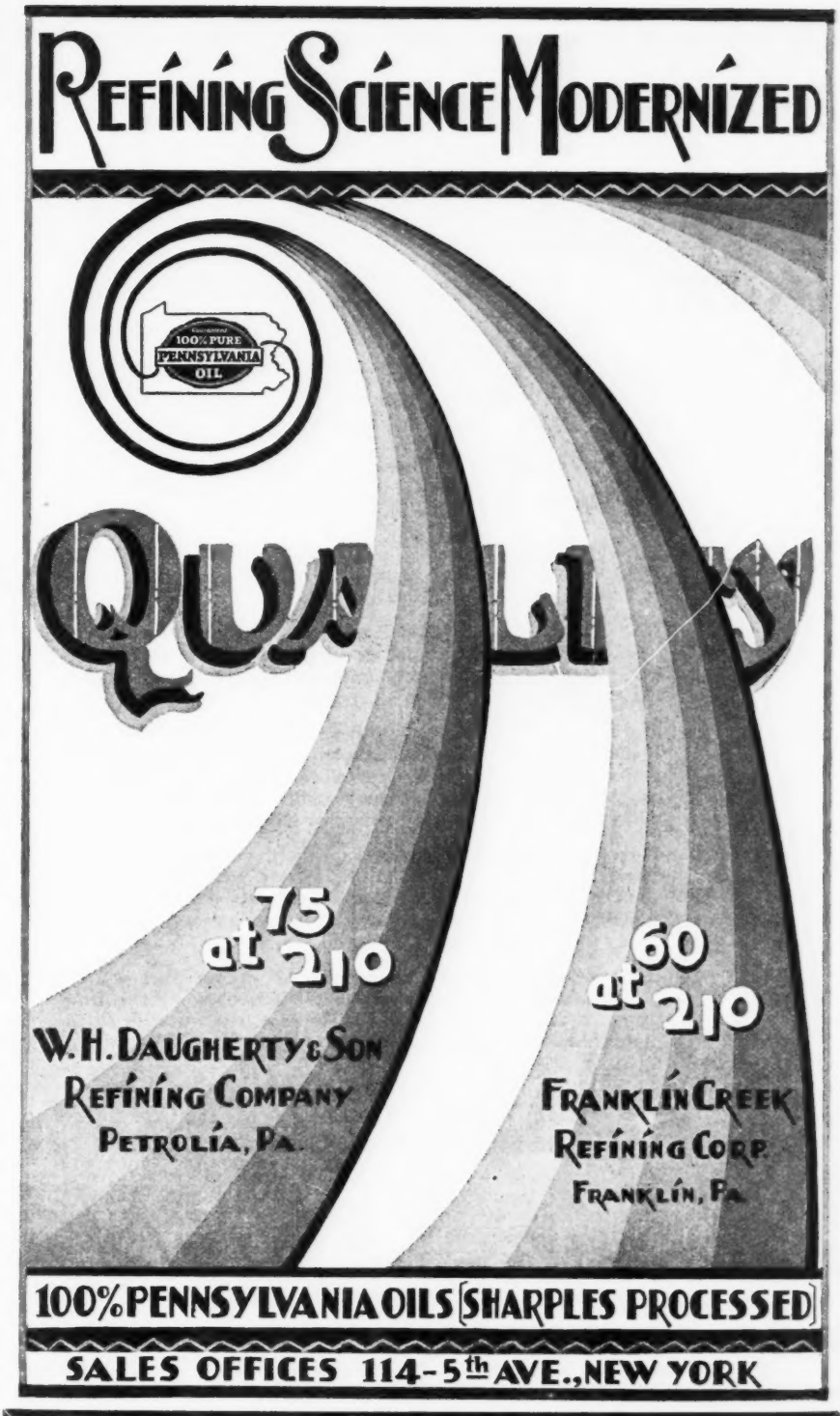
"Some of our boys go soliciting when they get off duty at the station. They call from house to house. Usually these calls are made in the early evening when the man of the house is at home and they always call on people they know; people they know to have cars.

"They take no literature because the calls are personal and they go to the front door because the calls are almost social. They can't expect to make but two or three in an evening so they go in and sit down if they are invited to do so.

"The company does not pay them overtime for this, nor do we pay them commissions on goods sold in this way. We simply employ men who will do this for us, men who take interest in their jobs. It takes more money to get them, but they are worth it.

"Not long ago a moving picture house held a guessing contest in one of the towns where we do business. The theatre people took moving pictures of persons around town, at schools and clubs and business places. Then on an advertised night they showed the pictures and offered cash prizes to those in the audience who guessed the names of the largest number.

"They showed our filling station and the man who runs it and the


REFINING SCIENCE MODERNIZED
100% PURE PENNSYLVANIA OIL
QUALITY
75 at 210
60 at 210
W. H. DAUGHERTY & SON REFINING COMPANY PETROLIA, PA.
FRANKLIN CREEK REFINING CORP. FRANKLIN, PA.
100% PENNSYLVANIA OILS (SHARPLES PROCESSED)
SALES OFFICES 114-5th AVE., NEW YORK

HEAVY DUTY TRUCK TANKS

The Kind That Will Stand Abuse

ALL SIZES — ALL TYPES

Send us your inquiry

BROWN SHEET IRON & STEEL CO.

ST. PAUL - - - - MINNESOTA

Every Point a Quality Feature

Model FD-50

FROM sill to roof deck, this full vestibule Model F. D. Highland Cab is a real job, built by men whose business is making cabs and only cabs, to meet all trucking conditions.

Notice that there is good vision in all directions—front, back, sides, and corners. The upholstery is mounted on springs and well padded. The construction is sound and will stand up under the roughest kind of work.

And like all Highland Cabs, it is mounted on the special Highland Rocker Sill Mounting which keeps it always riding on an even keel. In rough going when the chassis twists and strains the cab stays level. None of the movements of the frame are transmitted to the cab as would be the case if it was rigidly bolted on.

There is a Highland Cab for every make and model of truck. There is also a Highland Distributor near you waiting to give you the complete details of these better cabs—cabs that make money for you by cutting down costs and increasing the efficiency of your drivers.

Or, write us for the information direct. But whether you get the Highland story from a Highland Distributor or direct from us, get it before you specify cabs for your new trucks or to replace those on old trucks.

THE HIGHLAND BODY MFG. CO.
430 Elmwood Place, Cincinnati, Ohio

HIGHLAND *Cabs*
with ROCKER SILL MOUNTING

ANNOUNCEMENT
CONCERNING
GRANBERG PETROLEUM METERS

The manufacture and sale of GRANBERG METERS which has been conducted heretofore under the name of the Associated Supply Co., will now be conducted under the name of

GRANBERG METER CORPORATION

GRANBERG PETROLEUM METERS are used by nationally known distributors and are simple, accurate and reliable, and indispensable where the precise measurement of petroleum oils is required.

Ask Those Who Are Using Them.

Our Engineers in the Middle West and at New York are ready to assist in serving you.

GRANBERG METER CORPORATION
"Precision Meters for Petroleum Oils"
79 New Montgomery St., San Francisco, Calif.

Another type of Inter Ocean's Employes. This is "Dad" Frisbie who, for loyalty and personal pride, battled two negro hold-up men (either one twice his size) and refused to give up his cash even though they cut his collar clear through with a razor

crowd gave him a big hand. One of the girls in our office was there and heard it," concluded Mr. Reid.

LOS ANGELES, March 9.—W. C. Trout, president of the Lufkin Foundry & Machine Co. Lufkin, Texas, has been in Los Angeles assisting at the opening of the company's new California sales headquarters 1104 Commercial Exchange Building. The office will be in charge of E. P. Trout who has been in California for several months. Fred Yeager will continue to handle sales in California. Stocks of Lufkin Foundry equipment are carried at Los Angeles and Bakersfield in California.

LOS ANGELES, March 9.—"Bill" Bowles, in charge of field operations for The Texas Co. in the Gulf coast, with headquarters at Houston, was a recent visitor in California.

I N A B A T H O F O I L

Announcing

THE NEW ENGLISH TYPE

"RINGBELL"

BALL BEARING GASOLINE PUMP

by

SHOTWELL

After twenty years of pioneering in the creation of outstanding filling station equipment, Shotwell now offers its "Ringbell" pump in a case of distinctly English design, which conforms to the new and beautiful English type of station, and at the same time increases the attractiveness of structures of any type.

Gasoline pumps, air standards and light columns of identical design can be secured, making this the ideal harmonizing equipment for the super-station.

SHOTWELL PUMP AND TANK CO.
Boston : *Indianapolis*

Familiar Signs

"Clean Towels—Parking Space"

Mean "Stop"

to Tourist Trade

JUNE is coming, and vacation time. But with them, like the mother-in-law on the rumble seat, comes the problem to the local marketing company, "How are we going to get a bigger share of the tourist trade?"

His regular customers go touring and buy from somebody else. Other oil men's customers, equitably, should come touring and buy of him. How can he make more of them do just that.

Harry Brownell, political orator and oil marketer of Sioux Falls, S. D., once said publicly:

"We Independents are the best merchandisers in the business in our home towns. We can get our share of the business if we can just keep our customers at home, but they won't stay home. Our customers, like other people's customers, like to travel. They are intrigued by the open road and they don't have to drive down it very far until they get where we can't sell them a thing."

On that occasion he was addressing the Independent Oil Men of America, urging the more general use of the Spread Red Eagle over their stations. It was only the doctrine of national distribution to meet the demands of a going people.

Mr. Brownell's point was that "All tourists live somewhere, and the trademark they buy under at home is the one they are looking for when they go away. Show them a trademark they buy under at home, and the tourists will drive in."

Recently a salesman representing a nationally advertised brand of motor oil was overheard making the same plea to a prospect. He was in the office of a small oil jobber, owner of two or three filling stations on a paved highway. His office was in the back of his biggest filling station.

"I do not make enough off of your oils," the jobber was heard to say. "My own brand is just as good oil as yours, and mine pays me. Why should I sell your oil to part of my customers and make less by it."

"We do not suggest that," replied the salesman. "Your oil is probably every bit as good as ours and surely pays you better returns, but our oil brings you new customers. Our signs over your stations will stop tourists. The good reputation of your own oil is only local."

The Bartles-Shepherd Oil Co., Waterloo, Ia., of which A. L. Lommel is president, uses the emblems of two non-competitive associations to attract the tourist trade.

Mr. Lommel's company is a compounder of Red Hat motor oil, the lubricant fostered by the I.O.M.A., and an exhibitor of the Spread Red Eagle, the organization's emblem of Independence, and he is also a member of the Pennsylvania Grade Crude Oil association. He uses the emblem of that organization, which has been given national publicity in magazine advertising, as another familiar emblem to display for the benefit of the tourist.

It is not often an oil man can check on the results of such merchandising. There are so many influences at work on the average filling station to affect its gallonage that it is hard to account absolutely for an improvement in gallonage when one comes. Bryan S. Reid, head of the Inter Ocean Sales Corp., Riverside, Ill., checked his own benefits from membership in the I.O.M.A. to his own satisfaction, as follows:

His company entered into the cooperative sales campaign in the early days of May, 1927. Immediately he made an elaborate display of the national emblem. The best laboratory of results was at a filling station in a Chicago suburb which depends largely on transient business. The station might be called a "tourist station."

Each month of 1927, the gallonage of that station was checked carefully against business of the corresponding month of 1926. Fortunately for the experiment (unfortunately for the business) some competitive stations sprang up between it and the only local patronage it could claim. Moreover the highway from which it drew its best business was closed for a time. Nevertheless, it increased business month by month, and the only thing it could be attributed to was the national I.O.M.A. advertising. Here is how 1926 and 1927 gallonage compared at that station by months throughout the tourist season:

MAY, 1927, was 4.04 per cent greater than May 1926, and that was the first month the signs went up. The June over June increase was 40.14 per cent. July increase was 67.72 per cent; August, 72.04 per cent, and September 99.34 per cent. In other words, this station started the 1927 season with a few handicaps over 1926, but it almost doubled 1926 business before the warm weather was over.

Other things than merchandise attract customers into a filling station, and especially is this true of a tourist. He is a stranger in a strange land and one of the main things he wants is rest. Sitting in a car all day gets monotonous and any tourist, especially if he is traveling for fun, has some time to kill. In every town he passes there is a temptation to get out and stretch his legs. But where will he park his car? He does not know the city and he does not know the parking laws. If some good place does not present itself he may drive on without

If You're in the Lubrication Business—
If You're Planning to Go Into It—

Send for this Helpful Business Book!

Once merely an incident of motor car service, lubrication today is a business so extensive and profitable as to justify investment in the finest of service equipment. Coincident, therefore, with production of the new Weaver Drive-Over Auto-Lift, which is so modern an adjunct to this business, we have prepared a book on Lubrication Profits. A copy of it is available to every dealer and service man interested in this work.

What the Book Contains

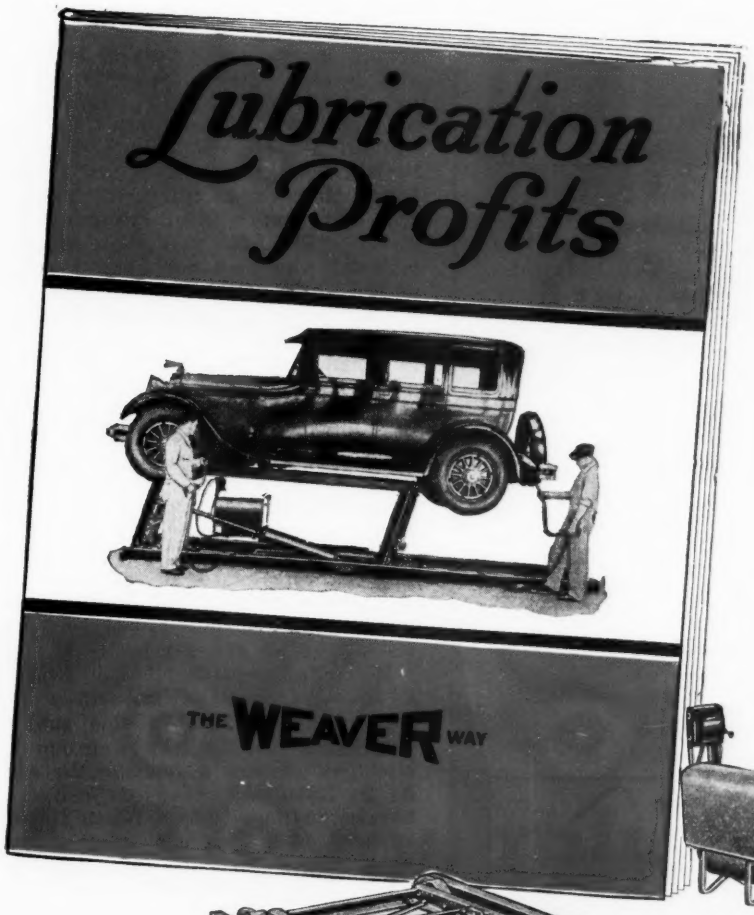
Lubrication Profits shows the business possibilities that exist for a lubricating business. It shows *how* lubrication service has been most successfully carried on. It tells of the actual profits made by the Weaver Laboratory Garage on 100 typical lubricating jobs.

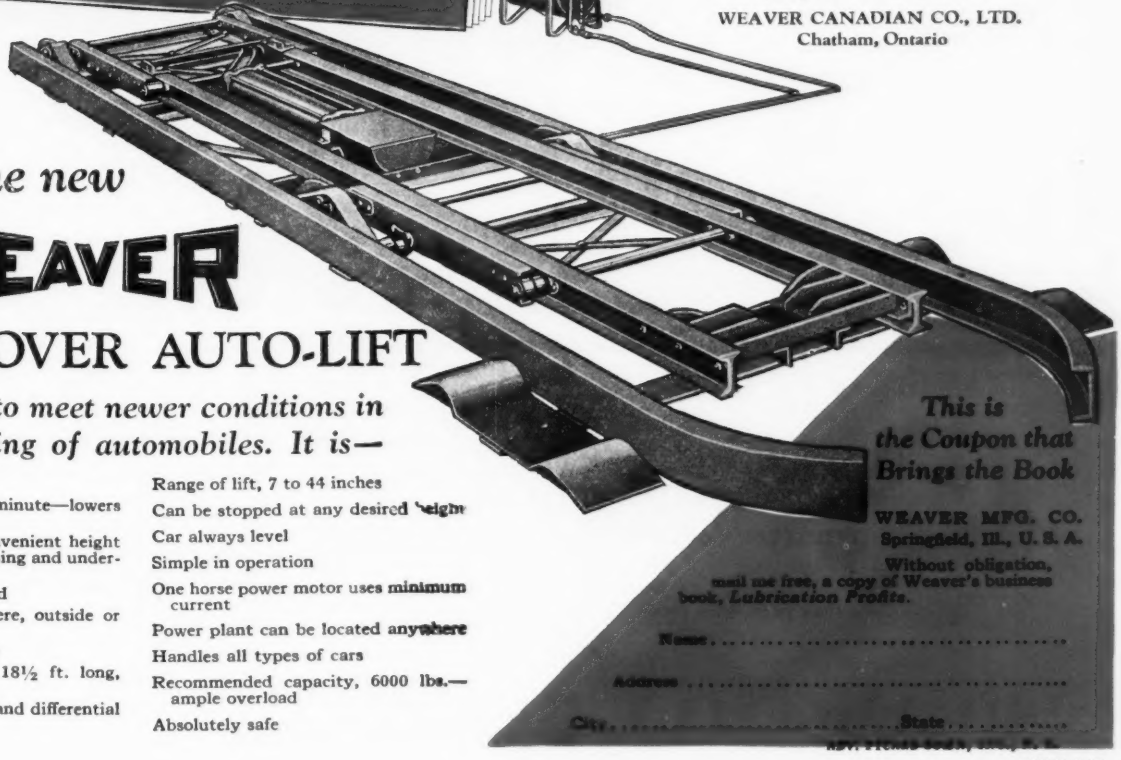
There are hundreds of business-building ideas—illustrated suggestions for service tags and business forms—novel methods of obtaining new lubrication customers and check-up on old customers. *Lubrication Profits* includes advertising ideas completely worked out—folders—suggested letters—post cards and publicity stories.

It discusses equipment—methods in lubrication and payment of mechanics who do the work. A comprehensive business book in every respect, *Lubrication Profits* is brimful of what's new in modern underbody service.

WEAVER MANUFACTURING CO.
Springfield, Illinois, U. S. A.

WEAVER CANADIAN CO., LTD.
Chatham, Ontario





This is the new

WEAVER
DRIVE-OVER AUTO-LIFT

Designed to meet newer conditions in the servicing of automobiles. It is—

- Easy to drive on
- Speedy—lifts car in 1 minute—lowers in ½ minute
- Car raised to most convenient height for lubrication, washing and underbody work
- Drive off straight ahead
- Can be placed anywhere, outside or inside
- No installation expense
- Requires little space, 18½ ft. long, 5⅓ ft. wide
- Lifts car by front axle and differential—wheels free
- Range of lift, 7 to 44 inches
- Can be stopped at any desired height
- Car always level
- Simple in operation
- One horse power motor uses minimum current
- Power plant can be located anywhere
- Handles all types of cars
- Recommended capacity, 6000 lbs.—ample overload
- Absolutely safe

This is the Coupon that Brings the Book

WEAVER MFG. CO.
Springfield, Ill., U. S. A.

Without obligation, mail me free, a copy of Weaver's business book, *Lubrication Profits*.

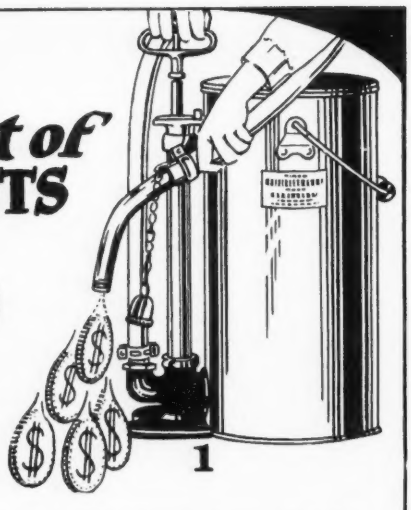
Name .....

Address .....

City ..... State .....

NPN-3-28

YOU
Can Squeeze a lot of EXTRA PROFITS out of ATTWOOD
PORTABLE Oil and Grease CABINETS!



HERE'S a generous dependable line of year 'round money makers. Popular prices allow them to pay for themselves in a short time. Quick, clean, efficient service brings customers back with repeat profits. Save labor, lubes and time!

No. 1—Valveless Grease Cabinet—Handles all greases, light or heavy, no valves—nothing to get out of order. Capacity 20 lbs. Delivers exactly ¼ lb. to a stroke. List price—**$12.50.**

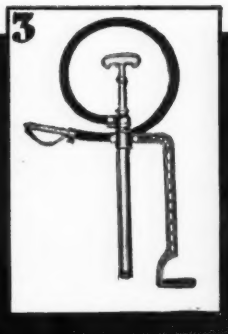
No. 2—Grease Cabinet—For medium oil and grease. Strong, well-designed and a popular price. List price—**$10.00.**

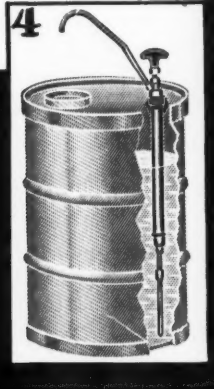
No. 3—Speed Pump—Transfers heavy lubes from original containers into gear cases, etc. Specially designed for tractor gear cases and other portable uses. A speedy operator. Pumps ¼ lb. on both up and down stroke. Built of seamless steel tube with heavy adjustable step base. List price complete with 40" hi-pressure grease hose—**$5.00.**

No. 4—Barrel Pump—Telescopic base permits adjustment to any size barrel up to 34". Handles any liquid. Delivers approximately 1 pint to each stroke. Prevents oil waste and muss. Compact floor space saver. List price—**$5.00.**

Write for Complete Bulletin, Data and Discounts

ATTWOOD BRASS WORKS, INC.
768-78 Front St., Grand Rapids, Mich., U. S. A.





CLASSIFIED ADVERTISING
will get results for you
no matter what you "want"

Turn to that page, with rates, at back of this issue.

getting out and looking around.

J. Bruce Gafill, Gafill Oil Co., South Bend, Ind., solved this problem for the tourist and declares that it has proven quite profitable. He builds all his filling stations on lots with no less than 100-foot frontage. South Bend is a good tourist town. Many of them pass Mr. Gafill's way and he has a chance to get his share of the transient trade.

The filling station drives are wide and easy of approach. Some lots occupy a whole quarter of a block and have a free parking rule up to a certain limit. The space is such that any wayworn traveler can drive his car in safely, even if the sides bulge with tents and carpet bags. Moreover he can turn it around and drive out without cramping his style. "This is attractive to any motorist who does not know the lay of the land," Mr. Gafill says.

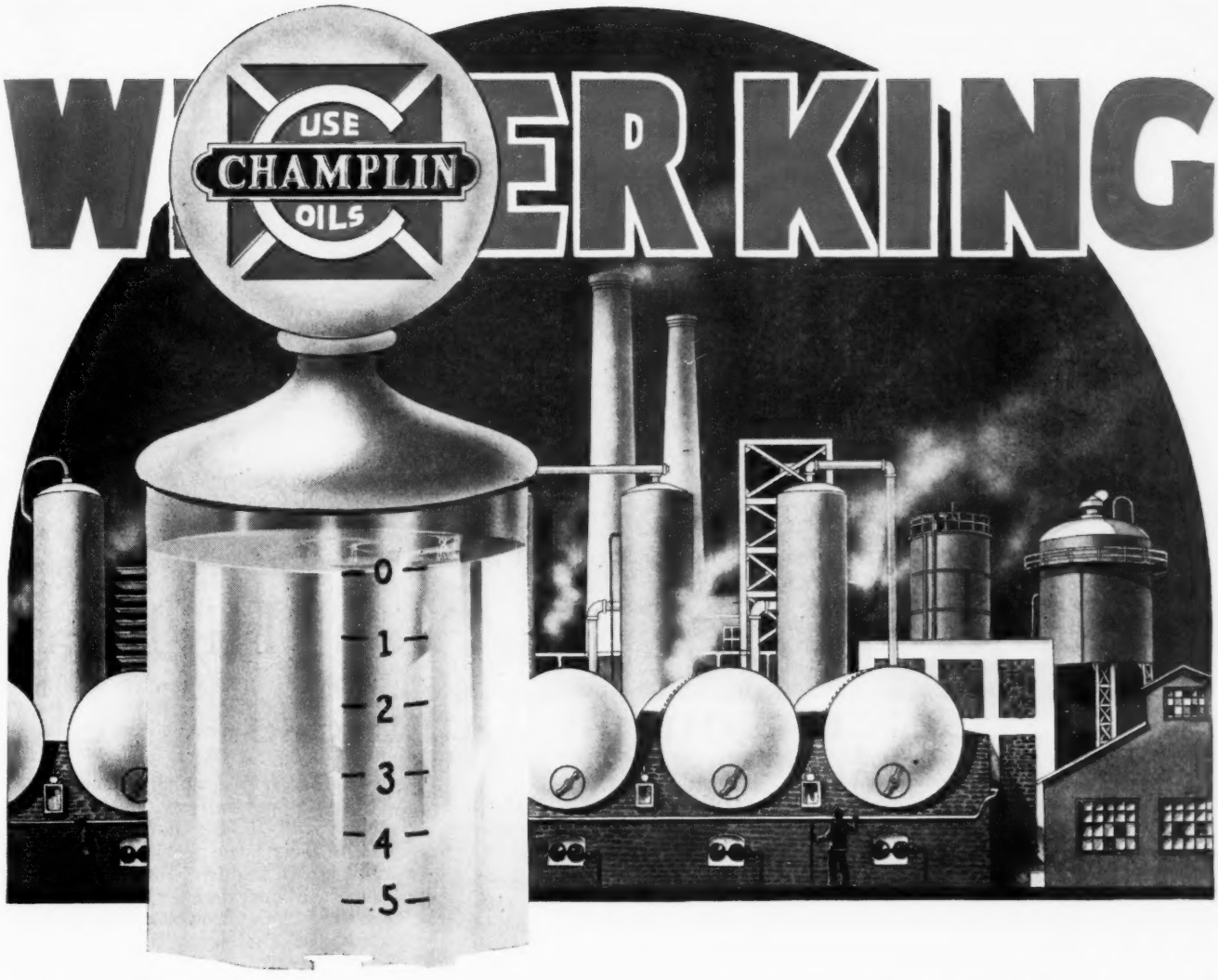
This type of customer parks at Gafill Oil Co. stations in numbers all summer. They come with their whole family and get out and stretch on the station lot. They even eat their lunch there sometimes. If they leave a few paper pie plates lying around they are not reproached for it. On the other hand, owners of high powered motors who travel across country de luxe appreciate safe parking places where there is no time limit. Gafill's filling stations of hospitable proportions attract them all and get business.

Many Independent oil men feature their rest rooms as attractions for transient trade. When this subject was being discussed by a group of Michigan jobbers a few months ago, A. D. Dubuisson, head of Wolverine Service Stations Inc., of South Haven, advised them to put their "Rest Room" signs out in front of the stations where they could be seen from the road. He operates a string of stations along the west coast of Michigan in towns that enjoy a great deal of summer resort trade. The roads are full of strangers in summer and it has proven profitable to cater to their comforts.

M. H. Crosbie of Crosbie Brothers Oil Co., Gibson City, Ill., has gone Mr. Dubuisson one better. He advertises the services of his stations for a mile down the road in every direction. The most remote road sign reads:

"One Mile to Crosbie Bros.' Service Station with Two Modern Rest Rooms."

"We have refrained from saying in our signs at the stations or out of town that the rest rooms are clean," Mr. Crosbie says. "Our idea is to let the outside appearance of a filling station speak for the housekeeping inside. If a customer sees a clean yard, an orderly front, white drive ways, and outside indications of thoughtful care-taking, he can gather his own impressions about what sort of condition he will find in the rest room."



A *Thoroughly Refined* HIGH GRADE WINTER GAS

3 factors explain the exceptional quality of CHAMPLIN Winter King Gasoline—first, its raw material, Garber high-gravity paraffin-base crude—second, that this crude is free from sulphur, permitting treatment at our refineries *without acid*—third, the ideal of "Thorough Refining" which has prevailed at the CHAMPLIN Refineries for 11 years. CHAMPLIN refines not to a commercial standard, but to the uncompromising standard of *perfection*.

WINTER KING is a crystal clear, straight-run, 60-62 gravity winter gasoline, under 430 end-point. Yet the price to jobbers is very little higher than that of ordinary gasoline. Orders received before 2 p.m. shipped same day. Phone, wire, or write.

CHAMPLIN Motor Oils, unsurpassed in quality, are now offered in the popular POUREZEE Cans.

CHAMPLIN REFINING CO. *Enid, Okla.*

Cook's Bunker Hill station in Ashtabula, Ohio, showing triple covered driveways, wide drives and station grounds

Uniform Stations Strung Along Highway Catch Tourist Business

By N. M. Mainpa
N. P. N. STAFF WRITER

IF EVERY gasoline station head believes every other fellow in the same business is, like himself, lying awake nights wondering what he can give away the next day at his stations or what new service he can perform for customers to attract business he is mistaken.

Here is one service station operator who is not losing any sleep conjuring up new schemes or new service ideas to attract trade.

He has never given away souvenirs. He has never sold premiums at low prices to get gasoline buyers. He has never cut prices.

In the two hours I talked with him the other day, he did not once mention the word "service." He does not discourage it, of course, but unlike most station men, to whom service is now the magic word, he does not talk about it.

In spite of all that, Hiram D. Cook, former farmhand, factory worker, shoe store owner, real estate developer, two-term mayor, of Ashtabula, O., and now owner and operator of the Central Standard Service Stations, Ashtabula, has more than doubled his gasoline gallonage during the four years he has been in the oil business.

He sold 2700 gallons of gasoline the first week he opened station No. 1 on Lake and Park Sts., Ashtabula, a town of some 30,000.

Last August, one of the peak months, motorists patronized his 12 service stations to the amount of 300,000 gallons.

"Uniformity is to me the most important thing a gasoline station can offer," said Mr. Cook. "I build all my stations along the same architectural lines—on large lots with wide driveways. I handle a gasoline that is uniform in quality."

His stations are on the Chicago-New York highway at points between Cleveland and Conneaut, O., a distance of some 80 miles. They are built to attract tourist trade as well as local. A motorist that has patronized one Central Standard service station will recognize another, as they all look alike.

A three-drive canopy stretches out to meet the street. This unusual canopy is not only seen from afar but can be immediately recognized by motorists as one of the Central Standard stations group. This distinguishing feature, Mr. Cook says, is one thing that has helped bring customers to his stations. Seven cars can be served at one time at any of these stations.

Tourists along the route can see these stations readily before they are close up to them, as they jut out to the street past some other stations that sit demurely in the background. Some of these other stations, Mr. Cook believes, are placed too far back on the lot to be seen readily and the motorist is apt to be well past them before he notices them.

The name of his stations is lettered in large gold letters the full length of the canopy and station, about 80 feet. The lettering is large enough to be seen easily from a distance.

Another factor which attracts tourist trade particularly, is the word "Standard" in the name. Motorists out of their home territory frequently stop in to inquire whether the stations are operated by the Standard Oil Co. The station men explain that, while Mr. Cook operates the stations independently, he sells Standard Oil Co. products.

Mr. Cook's idea in building his stations was, first of all, to catch the tourist's eye. The stations are all located on main traveled highways.

Spacious driveways are another factor which Mr. Cook determined to make an outstanding feature.

"Driveways," he says, "must look inviting to the motorist. They must be wide enough to be seen, in the first place. They must give the impression that they are easy to get into without the necessity of any abrupt turns."

Stations which are built on corner lots have four separate entrances into the grounds. These drives average from 40 to 70 feet in width, depending upon the size of the lot. Truck and bus trade were given prime consideration in laying out driveways so that plenty of room would be provided for turning into and out of the station.

The most recently completed station, in the east end of Cleveland at the corner of Euclid Ave. and London Rd. occupies a lot 165 by 150 feet. All stations are built on lots ranging in size from 120 to 200 feet in length.

Many business ventures, all highly successful, have formed the career of Mr. Cook. Some few years ago,

Uniformity Draws Tourists

"A UNIFORM style of station and a uniform product are the two greatest assets in my business," says Hiram D. Cook, president of The Central Standard Service Co., Ashtabula, O.

His 12 stations on the Chicago-New York highway between Conneaut and Cleveland, O. have been built to attract tourist trade particularly. They all look alike for easy recognition, and have as an outstanding feature a triple-drive canopy which stretches close to the street.

when the public was doing most of its traveling on foot instead of in cars, he was providing Ashtabula consumers with shoes. Among his quite youthful customers was the writer when size 3 in the baby sizes was about right. The shoe size has since increased somewhat.

After the shoe store, Mr. Cook became interested in politics. He has been a member of the city council for a number of years, but first became prominent 20 years ago when elected mayor of Ashtabula. At that time he began the development of Bunker Hill, an exclusive residential district, where he purchased 70 acres of land. This he has divided into allotments, obtained street car service, paving and installed other improvements.

One of his real estate purchases four years ago was a 99-year lease on Lake and Park Sts. This particular location looked good for a filling station, so then and there Mr. Cook decided to build a station and enter the oil business.

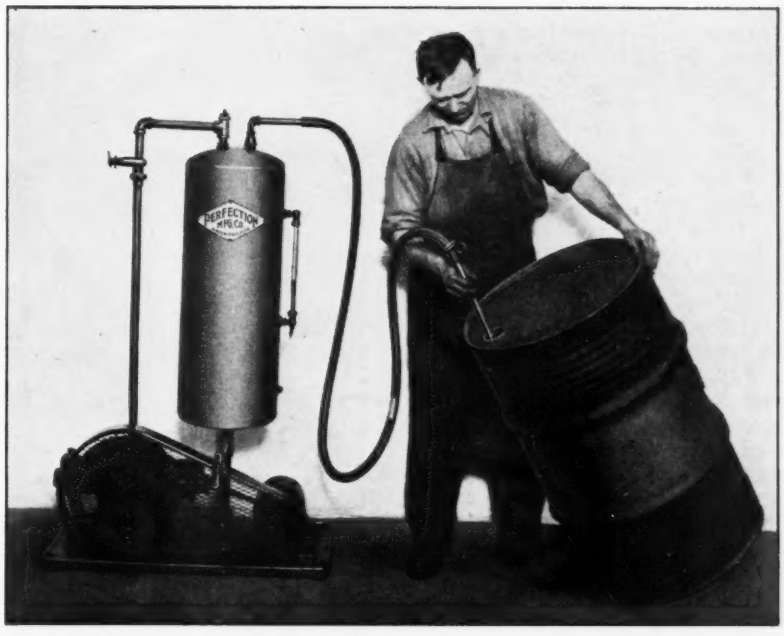
Neither architect nor blue print was employed to erect the station. Mr. Cook had his ideas as to what a station should be fixed in his mind, much as an artist would have the mind picture before he attempted to put it on canvas.

He put the builders to work. He stood on the ground while the construction was going on and told the men what to do. The finished job looked just like the one he had visualized. All others have been built by reference to the original.

Not much encouragement was given Mr. Cook by some of his friends on this new venture. One made a $10 wager he would not sell 1,000 gallons of gasoline the first week. He sold 2700 gallons and had an extra $10 in his pocket.

All Mr. Cook's station men work on a commission basis. He believes this is the more satisfactory method as, he says, the men take more pains to serve a customer well to insure his return, when they know it means extra money to themselves. Whatever

How do YOU clean your Oil Drums?



The Perfection Vacuum System

Every oil jobber that wholesales Lube oils in drums has the problem of cleaning the oil drums that are returned. The Perfection Vacuum System provides a very efficient means for doing this at a very considerable saving in time and labor.

The Perfection Vacuum Pump has fourteen years of satisfactory service behind it. Every pump is guaranteed to produce at least twenty-five inches of vacuum.

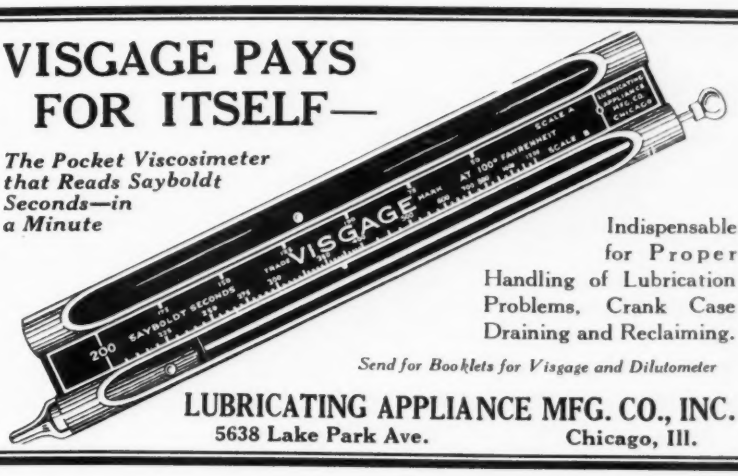
This vacuum system, as illustrated, can be bolted to the floor or moved around as desired. It is equipped with a ¼ H. P. motor and can be connected up to any light socket.

Write for further information and prices.

Perfection Manufacturing Company
2194 East Hennepin Avenue Minneapolis, Minn.

VISGAGE PAYS FOR ITSELF—

The Pocket Viscosimeter that Reads Sayboldt Seconds—in a Minute



Indispensable for Proper Handling of Lubrication Problems, Crank Case Draining and Reclaiming.

Send for Booklets for Visgage and Dilutometer

LUBRICATING APPLIANCE MFG. CO., INC.
5638 Lake Park Ave. Chicago, Ill.

little services they want to perform for the customer is up to them, Mr. Cook explained, but he does not instruct them in anything special along these lines.

Courtesy, of course, is expected of all employes. But working out service ideas is eliminated from Mr. Cook's thought, and he uses up no energy in this line. He oversees the entire business and pushes gasoline sales mostly. Accessories are handled but nothing else, besides oil products.

One thing he does insist upon is that the station attendants have some mechanical knowledge for emergency cases. They must be able to make minor adjustments or tell the customer what needs attention in his car. For all regular repair work, the customer is directed to a garage.

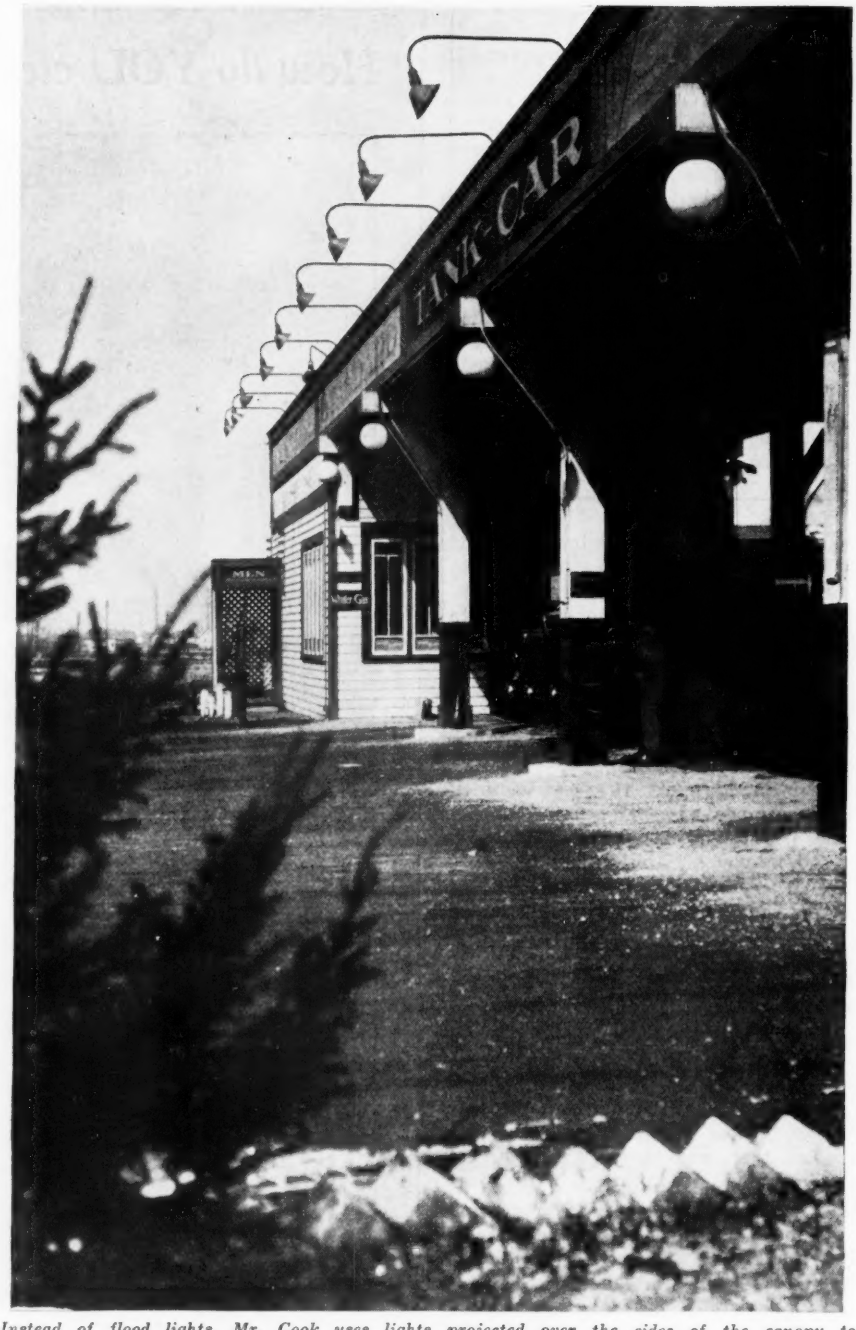
Much of Mr. Cook's business is done on a credit basis. He says he believes in getting all the business he can, whether it is cash or credit. The larger customers, such as trucking concerns, bus companies and manufacturing companies of his town, are on his list as charge customers. Conducting a cash business only would result in the loss of many sales and Mr. Cook says he has no trouble in collecting accounts.

The miracle of personality is a strange asset. Just as there is only one Al Jolson, for instance, so is there the service station attendant who carves a niche for himself in the esteem of patrons.

When an attendant is such that the customers stick to him even if they move to the other end of town, he may be said to have reached the heights of a pleasing personality. On the other hand, if a station man performs no end of services for his customer but is a colorless person entirely devoid of personality, it is safe to believe that the customer would not take the trouble to pass many stations along the way to return to him.

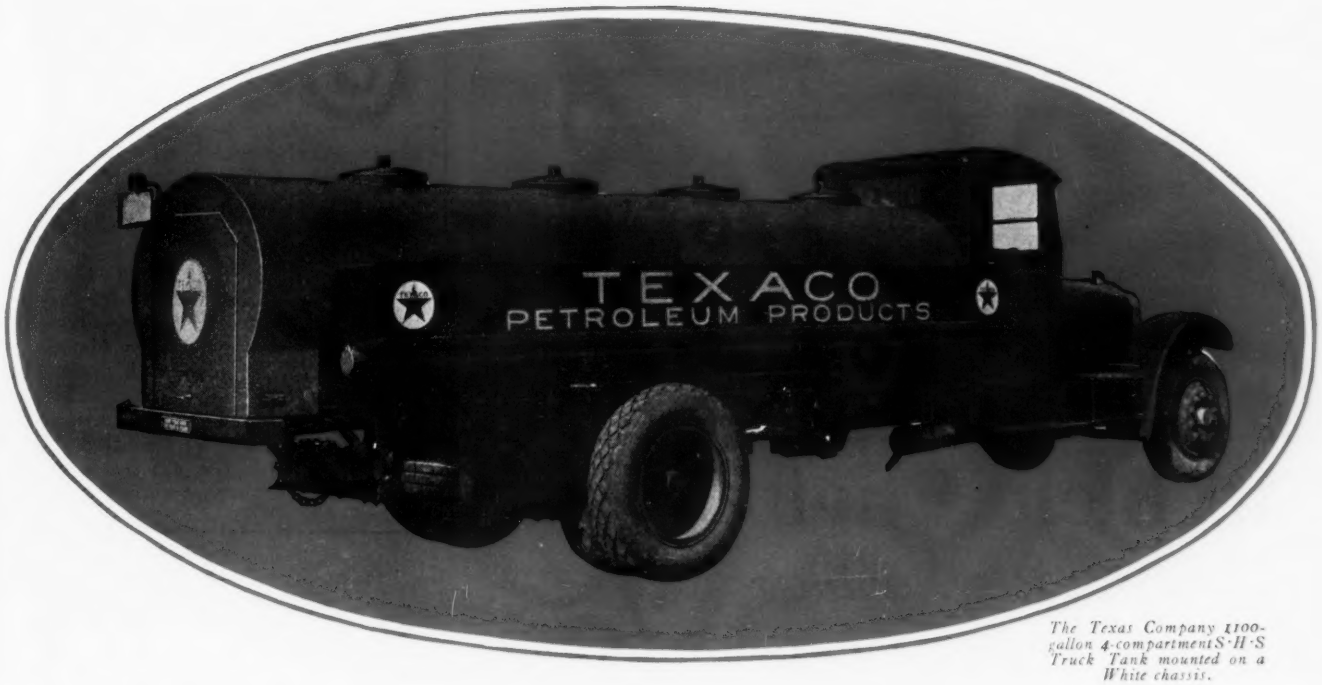
Of the personality type is Leroy Johnson, who is on duty at the "East Side" station in Ashtabula, of Mr. Cook. He has made himself so popular and indispensable to his circle of customers they will patronize no other station. When they move away from his locality, they come back to his station. Some of them have moved as far as three or four miles away to the other part of town; but, whenever they are in need of gasoline or oil, they are found back at "Leroy's". They even pass other stations of the same company along the way, proving that a personal liking for the attendant may be more powerful than all arguments about gasoline quality, prices or anything else.

Leroy is not one of the talkative, high pressure salesmen, who is often so chuck full of enthusiasm and salesmanship that he becomes annoying. Leroy goes about his business quietly.



Instead of flood lights, Mr. Cook uses lights projected over the sides of the canopy to illuminate the company name at night. This is Central Standard Service Co.'s tank car station at Euclid Ave. and London Rd., East Cleveland, O.

Central Standard Service East Side Station in Ashtabula, showing how front of station is built out to street line to attract tourists' attention



The Texas Company 1100-gallon 4-compartment S·H·S Truck Tank mounted on a White chassis.

A NEW Type of Truck Tank *that is distinctly* Better *and* Safer

S·H·S Truck Tanks mark a vast improvement in tank construction and appearance, and, in both categories recognition is given by many of the foremost oil companies in the form of orders and re-orders.

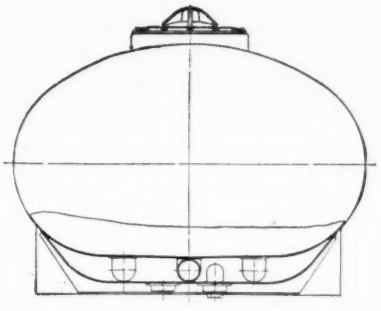
S·H·S Tanks are all-steel, welded into one piece, and carried on a shock-absorbing flexible suspension mounting. All pipes are 3-inch seamless steel tubing with *welded joints*—no threaded connections.

The filler caps are hinged, non-detachable, quick-opening and amply vented.

The drain pipes are equipped with special valves to stop flow of gasoline in emergencies. Internal selective emergency valve control, fusible plug in manholes and Wheaton self-closing faucets make S·H·S Tanks really safe.

The entire freedom of all girth straps and seams gives a clear, smooth surface on the sides of the tank body for beautifully designed advertising. And the grace and symmetry of S·H·S Tanks, the beauty of their surface and contour, speak in terms of quality for the products they carry.

Send today for complete information regarding this new type of truck tank that is distinctly ***better*** and ***safer***.



This cross-section view shows the compartment, under and integral to the main body of the tank, in which all pipes are enclosed within the tank, thus preventing injury to them in case of collision.

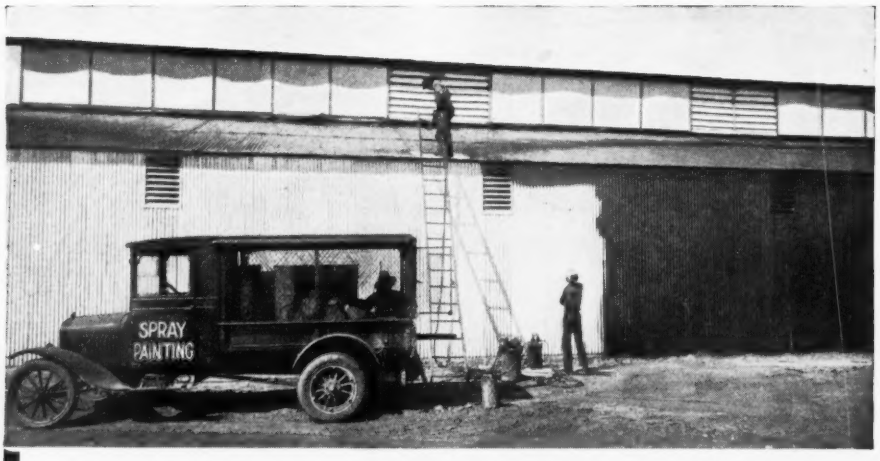
SMITH-HAMBURG-SCOTT

505-511 West 57th Street
New York City

WELDING
CO.

Harris Ave. at Marion St.
Long Island City

S·H·S TANKS



Oil Field Engineers

Make Big Savings On Maintenance Painting!

It has been conclusively proven on oil field jobs, that spray painting provides a better and more uniform film of paint with greater wearing qualities than can be done with a brush on surfaces oil field engineers have to paint. And on actual work done on big jobs the savings are remarkable.

Oil companies have also greatly speeded up the painting of large trucks with the Binks Spray Gun. These trucks are back in service in half the time formerly required when painted with the brush.

Enormous savings are made every year in Spray-painting all buildings and equipment, — property is protected from deterioration, maintenance costs are so low that more painting can be done,—working conditions are improved,—hazards are reduced.

The Binks Portable Spray Painting Unit quickly pays for itself, provides years of use, benefits and savings. Our Bulletin No. 34 will supply interesting information. Write for it today.

HOW 2 Men Covered 52,000 Square feet in 6 hours!

The above Petroleum Exposition Buildings were "Binks-Sprayed" last September. Two men with a Binks Two-Gun Outfit spray painted 52,000 square feet of surface in six hours, or twelve one man hours, on corrugated sheet iron, roof and sides with red oxide primer. Work was superior to brush work. Also on the next coat, which was done with aluminum, the same men covered 90,000 square feet in 14 hours and did a much superior quality of work than could have been done with a brush!

BINKS Spray Equipment Co.
Dept. C.
3127 Carroll Ave., Chicago

Branch Offices

New York 56 Warren St. | Detroit 4456 Cass Ave. | San Francisco 371 Fifth St.

Representatives in all Principal Cities.

If not one— then another

Filters Made By United Filters

Sweetland Pressure Filter
American Continuous Filter
Sweetland Cantilever Filter
Kelly Pressure Filter
Sweetland Thickener
United Filter Press

WHEN refineries come to United Filters for help in filtration problems, they come to "filtration headquarters".

And this is no idle statement, as United Filters has six distinctly different types of filters from which to select.

If one will not fit your particular problem, another will. This stamps the broadness of United Filters service.

UNITED FILTERS CORPORATION
Hazleton, Pa.—Los Angeles Office, Central Building
Other Offices in Chicago—New York—Salt Lake City
Export Office—25 Broadway, N. Y.—Code Address, Unifilter, New York

Morning Papers Given

A MORNING paper to be handed out to customers on their way down town to work is a new service which will be put into effect at the Central Standard Service Station at Euclid Ave. and London Rd., East Cleveland, O.

This is the first time that Hiram D. Cook, owner and operator of 12 of these stations, has ever tried out any service ideas, such as this, at any of his stations.

He has never given away prizes, souvenirs or sold low priced premiums, or cut gasoline prices below other stations.

He has a cheerful greeting for all. He gives the appearance of capability. He remembers names and is able to call customers by their names. He performs any little service that he believes the customer requires or will appreciate.

His customers have such faith in him that, when he tells them their cars need oiling, greasing, or repair work, it is as good as done. His word is usually heeded. Many customers depend on him entirely to either call them up when he thinks their cars need going over, or to tell them when they drive in for gasoline.

Not long ago he looked at a customer's car and told him the battery was about burned out, which proved to be right when the customer hustled his car to the garage. This perhaps prevented the car owner from being stalled somewhere on the road when he may have been in a hurry, and the customer appreciated this advice.

For women drivers Leroy gives a little extra attention. He has at least three on his list who simply instruct him to come over to get the car when he thinks it needs oiling, greasing, or any other attention. He keeps a record of each time that he has greased the car, or looked it over generally for any adjustments and then advises the owner. Women especially appreciate this service.

"Leroy," as he is familiarly known to the trade, has reached the conclusion that women are fussy about their cars. But his personal interest in their cars assures their owners that only he is capable of giving their cars the attention they require, and they probably could not be hired to drive elsewhere.

There are five Central Standard Service Stations, which are operated as The Central Standard Service Co., in Ashtabula; one each in Conneaut, Geneva, Unionville, Mentor, Willoughby, Wickliffe and Cleveland. More may be opened up in the future, as business warrants.

Super service station of General Petroleum Corp. at Hollywood boulevard and Lyman street, Hollywood, Calif., all departments of which are sublet to individual operators. This station is built on a relatively small lot. In larger stations the service departments are built on two sides of the lot and separate from the gasoline and oil sales department

Super Service Stations Thrive Best Operated By Individual Owner

By William E. Green
N. P. N. STAFF WRITER

LOS ANGELES, March 10

THE super service station is popular in California, when operated by individuals, but is not growing in favor among the major refining and marketing companies. It has proved a success under the management of an individual, who is at least part owner, but large companies have found that it is not possible to operate super service stations as they operate ordinary service stations. The human equation is missing.

Super service stations have been built by major companies, but most of them have been leased to individuals. In some instances the major company operates the gasoline pumps, but other departments are leased to individuals.

There are more super stations in California now than three years ago, but the growth has not been startling. The Richfield Oil Co. owns 15 super stations in California, but 14 of them were erected before 1927. Early this year, no plans had been made to erect more. California Petroleum Corp. has built several super stations in the last two years, but these stations were leased to individuals, to be operated as 100 per cent Calpet products stations.

One fine example of the profitable method of operating a super station is exemplied in the success of M. D. Gerard, who opened such a station at Pico and Grenshaw avenues, Los Angeles, six years ago.

The neighborhood of the station was thinly populated when the station was built but as the area grew in population, Mr. Gerard's business grew. But the growth of turnover and profits came largely from being constantly on the job, coupled with the fact that Mrs. Gerard was and is a live and doing woman, who helped when helping counted.

Mr. Gerard made it a practice to operate the gasoline pumps, tire and accessory shop, the wash rack and the greasing business, leasing the repair and battery places. This practice was continued until two years ago, when he leased the service station part consisting of the gasoline dispensing business to the Associated Oil Co. This arrangement has been found satisfactory.

The gasoline pumps drew business to the rest of the super station, and the other way around. It is largely a fifty-fifty proposition, as to which department draws business for the other.

Two years ago Mr. Gerard purchased a lot at Tenth and Grenshaw avenues for $35,000. About $16,000 was spent in buildings, paving and equipment. Today the station's gallonage ranges between 800 and 1000 gallons daily, and the real estate, bare of buildings, could be sold for $125,000. It would bring $100,000 at forced sale.

This indicates that his venture has been profitable from the standpoint of the increased value of the real estate, but the station has never failed to pay profit, allowing interest on the investment at present value. This station is run by Mr. and Mrs. Gerard, with R. H. Kerr as station manager, except the battery and repairs shops are leased to individuals. This station also handles Associated products.

Mr. Gerard has never been forced to cut prices. He has never given premiums. He has never advertised. He depends entirely upon so treating his patrons that they want to come back. These satisfied customers tell their friends, and thus advertise the station. Mr. Gerard says that a good

The DEEP-ROCK Story

The Deep-Rock *gives* far more than

There is (1) present profit and (2) future security for you as an independent oil jobber, in availing yourself of the Deep-Rock Franchise

1 *Present Profit* because there is an established acceptance of this well-advertised, strongly entrenched line of motor fuels and lubricants. Because it offers you three famous brands — *Better Than Ever* DEEP-ROCK Gasoline, Certified DEEP-ROCK 100% Pure Paraffine Motor Oils, and one of the best and most popular anti-knock motor fuels ever developed, KANT-NOCK Gasoline.

2 *Future Security* because with the Deep-Rock Exclusive Franchise goes a long-time guarantee of protection against loss of franchise and invasion of your territory by the manufacturer, and because in KANT-NOCK Gasoline you have an opportunity to establish yourself as a distributor of one of the finest anti-knock motor fuels available—something vital, as you know, to tomorrow's high-compression motors.

On your side, the Deep-Rock Franchise asks only fair and square merchandising.

To support this you will have the benefit of Deep-Rock's complete and well-rounded program of advertising and sales assistance. You will be assured of a constant, dependable source of supply, because of Deep-Rock's complete cycle of operations—producing, refining, transportation, storage and distribution.

You will have the assurance that behind every Deep-Rock product, backing up and supporting its quality and rightness for the job in hand, is a Research Laboratory that is constantly seeking new and better results.

The achievements and contributions of the Shaffer Oil and Refining Company (manufacturers of Deep-Rock Petroleum Products) to the industry, in the way of bettered products and advanced merchandising methods, are well known.

EASY STARTING
KANT-NOCK
REDUCES CARBON
GASOLINE

This is reflected in KANT-NOCK, *a true gasoline, pink in color, of 64°-66° gravity, 350-360 end point, with the equivalency of 50-55 benzol in anti-knock quality (Midgely bouncing pin test).*

ALWAYS GOOD

product must be sold, but that service, cheerful service, is the greatest business builder of them all. He permits charge accounts, but bills must be paid promptly.

The super service station business is conducted in such a manner that Bradstreet could be given an accurate statement of the condition of the business on three hours' notice. Every afternoon at 2 o'clock an inventory is taken of everything for sale in the entire station. The tanks are "sticked", the lubes inventoried and tires and other accessories counted. The cash register is checked, and if something fails to balance, the fault is found immediately, not the next day or next week.

Two shifts are used, and at the time of the inventory, both shifts are present. If something is wrong, the day's happenings are fresh in the memory of the employes. Mr. Gerard uses a simple system to keep his daily inventories, using a book for this purpose, and no printed form is resorted to. The cash register is of the best make, designed to keep check of the different articles sold. The system is not elaborate, but satisfying.

The super service station idea is not new to California, but the only change noted over several years' period, is the gradual increase in number, and improvement in type of structures. Several years ago, lumber was used mostly, but as the city built up fireproof construction was used. And again, the stations of most recent erection are more in keeping with the better class of business or residential structures in their respective neighborhoods.

Few important architectural changes have been made in the last two or three years. In several instances unusual super stations have been built, but these are exceptions and not the rule.

Usually a super station is built at a corner. The gasoline pumps and small office, in most stations, occupy the central part of the plot with the other shops along the inside lines of the property. This scheme provides ample driving space between the shops, which are placed side by side, and the gasoline pumps. Often a battery can be serviced while the gasoline tank is being filled.

Some years ago, the air hose was placed near the gasoline pump, but in most cases this layout has been changed. Now the air is at the side. The radiator of the car can be filled as the gasoline is being filled, but if air is needed the car must be driven to the side of the lot making space for another car at the pump.

There is a tendency among the most successful service stations to cut down the number of accessories sold. This is true in the larger cities of the West Coast. Large automobile accessory concerns operate in Los Angeles, San Francisco and the other larger cities, selling accessories at prices which would not be profitable to the operator of a super station. In fact, the most prosperous super stations cater only to the essential needs of of the automobile owner, rather than the knickknacks. A large stock of accessories would necessitate an additional clerk, but the additional profits would not justify the extra help.

M. D. Gerard's super service station at 10th and Crenshaw streets, Los Angeles. The land, buildings and equipment are owned by Mr. Gerard. The various service departments are sublet. The gasoline sales department is a pavilion. The cash register is on a stand beside the middle column on the street side

Major companies who retail their own products, have many stations at small communities along the highways, but these are not super stations. Generally repair shops and battery places are nearby, but not directly connected with the gasoline and oil stations.

The greatest improvement to be found around service stations of every character in California is in the service rendered. A driver will seldom have the opportunity of placing air in his tires. He seldom can act fast enough to fill his radiator. The station attendants are on the job and the driver must stand aside. Arrangements of the air and water hose have been improved. The pressure gages are more accurate, especially since the use of the balloon tire became common. The service station operators have simply met the situation, and they are fighting for business. They must be on their toes, as competition is keen.

The service station that renders real service, holds the business by the service rendered and not by cutting prices. There are many instances in Los Angeles of stations, located within two or three blocks of each other, where one station sells gasoline at 20.5 cents, while the other station sells is at 18.5 cents. The higher price station is holding old business so successfully that it is hard to understand why the other fellow cuts his price, or rather gives away his profits.

It is the policy of some of the major company-owned stations to operate grease and wash racks in connection with the sale of gasoline and oils. These companies are anxious to sell their products and are showing no tendency to get into other businesses. The grease rack is responsible for the sale of the product made by the company. The wash rack is run as an accommodation rather than a money maker. This deviation is largely because many automobile owners like to have their cars washed at the time they are lubricated.

The super service station is suitable to any part of the country. Structures should be built to suit the climate. It is doubtful if the super station will ever become popular with the major company, except as mentioned before. The successful super station is a business of some magnitude, and personal attention of an individual interested more deeply than in an ordinary salary for certain hours of labor, is needed, if financial success is expected. Some major companies do not even build stations to be leased, as they do not feel that they can be given the necessary and proper kind of attention.

PONCA CITY, March 9.—W. H. McFadden, who recently announced his retirement as executive vice-president of the Marland Oil Co., will continue to make Ponca City his home. With Mrs. McFadden he has recently spent some time in New Orleans and Hot Springs while reconstruction work on their home was in progress. Mr. McFadden has announced the letting of a contract for the second billet of the state American Legion's home for children of former service men. The first billet was given to the Legion by E. W. Marland. The cost of each billet is about $40,000.

HOUSTON, March 8.—The body of George McQuaid, secretary of the southwest division of the natural gas department of the American Gas Association was taken to El Paso for burial after his death in Dallas, March 5. Heart failure was the cause of death. Before becoming director of the Texas Public Service Information Bureau at Dallas, which position he also held at the time of death, Mr. McQuaid was managing editor of the Dallas News. He had been previously identified with Galveston and San Antonio newspapers in executive positions.

Drive for Profits Seen in Refiners' Smaller Crude Runs in January

By R. B. Stafford
N. P. N. STAFF WRITER

CLEVELAND, March 10 REFINERS in January reduced daily average runs of crude and other oils to stills to 2,411,193 barrels. This was the smallest average in 15 months.

If this average is an indication that refiners are not to be stampeded by a large supply of crude oil this year and will not make more products than the market can absorb, the augury is good. Better prices for gasoline, kerosene, lubricating oils and all the other products should follow.

Although domestic demand for gasoline was 17 per cent more than in January, 1927, total domestic demand for refined and crude oils averaged only 1,877,000 barrels a day, the smallest average since March, 1926, almost two years.

The accumulation of gasoline stocks at refineries in January was not abnormal for the season. It amounted to only 3,789,000 barrels. In January, 1927, the accumulation was 7,035,000 barrels. There were increases of only 1,000 barrels of kerosene, 118,000 barrels of lubricants, and 1,686,000 pounds of wax. Stocks of fuel oil east of California were lowered 2,359,000 barrels.

The large gain came in crude oil stocks, both in California and east of that prolific state, in spite of a decline in crude production of 57,700 barrels to 2,332,900 barrels daily. Refiners east of California added 1,932,000 barrels to their crude oil supplies and on Jan. 31 held 41,167,000 barrels, the largest volume held by refineries since the Bureau of Mines began to collect statistics on refiners' reserves of raw material.

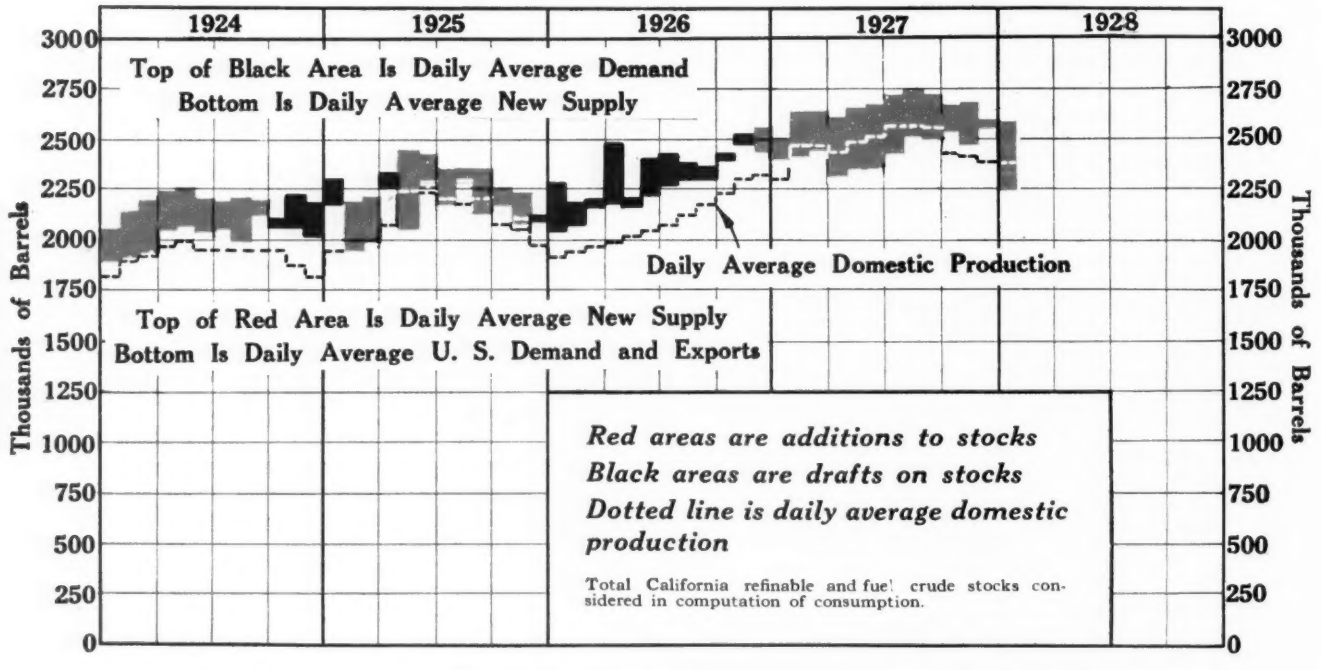
Stocks of domestic crude oil held in pipe lines and tank farms east of California, increased 7,246,000 barrels in January. Stocks of foreign crude oil not held at refineries rose 39,000 barrels. In California stocks of refinable crudes rose 435,000 barrels and stocks of heavy, fuel grade crudes and fuel oil which is lumped with the heavy crudes in the bureau's statistics, increased 2,530,000 barrels. Total gain in California was 2,965,000 barrels and in the whole country 10,211,000 barrels.

With a gain of 1,901,000 barrels in stocks of refined oils in the whole country, a gain of 10,211,000 barrels in crude oil stocks and one of 6,000 barrels in natural gasoline stocks, the total increase in all supplies of petroleum in January was 12,118,000,000 barrels.

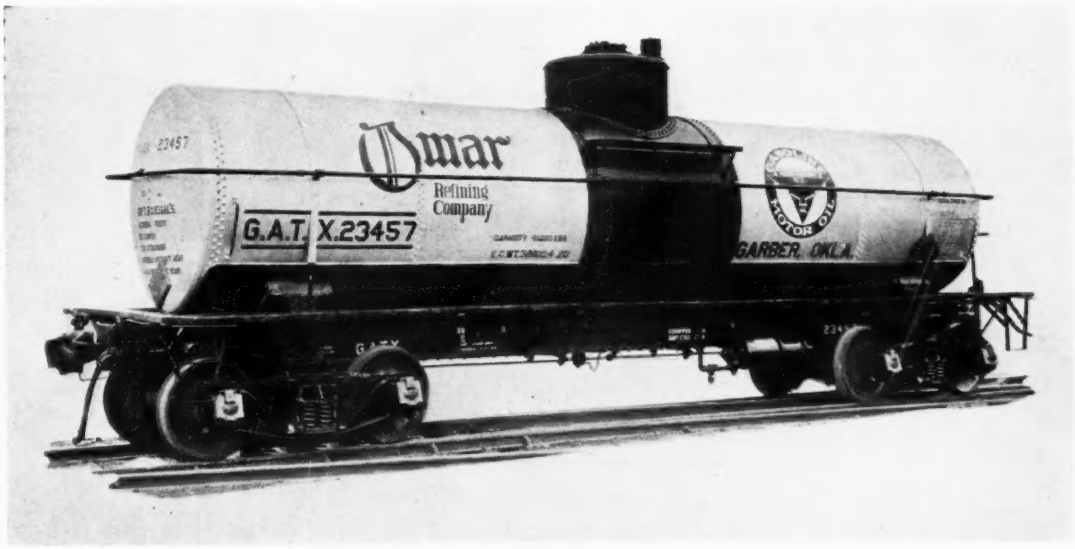
Total stocks of all oils, including natural gasoline, amounted to 596,302,000 barrels Jan. 31, or 259.7 days' supply at the January rate of foreign and domestic demand for crude and refined oils. This supply was the largest volume of crude and refined oils ever held above ground in the history of the industry.

The 584,184,000 barrels of crude and refined oils held in storage Dec. 31, 1927, was only 217.4 days' supply

Crude Oil Production and Demand



January domestic production	2,332,900 Bbls. daily av.	Stocks in pipe lines, and at tank farms east of California, Jan. 31, 1928	317,597,000 Bbls.
January imports	198,200 Bbls. daily av.	Stocks at refineries, east of California	41,167,000 Bbls.
Total new supply	2,531,100 Bbls. daily av.	Stocks of foreign crude not at refineries	128,000 Bbls.
January indicated demand east of California	1,643,500 Bbls. daily av.	California stocks 20° A. P. I. and lighter	20,493,000 Bbls.
January indicated California deliveries	518,100 Bbls. daily av.	California stocks heavier than 20°	94,327,000 Bbls.
January exports	39,500 Bbls. daily av.	Total stocks Jan. 31, 1928	473,712,000 Bbls.
Total indicated demand in January	2,201,100 Bbls. daily av.	Increase in stocks in January	10,211,000 Bbls.
		Stocks Jan. 31, 1927	397,960,000 Bbls.



Omar

NOmar—NOC
64-66 375
60-62 400
58-60 U. S. M.
41-43 W. W. D. T. Kerosene
Gas Oil—32-36
Fuel Oil—18-22

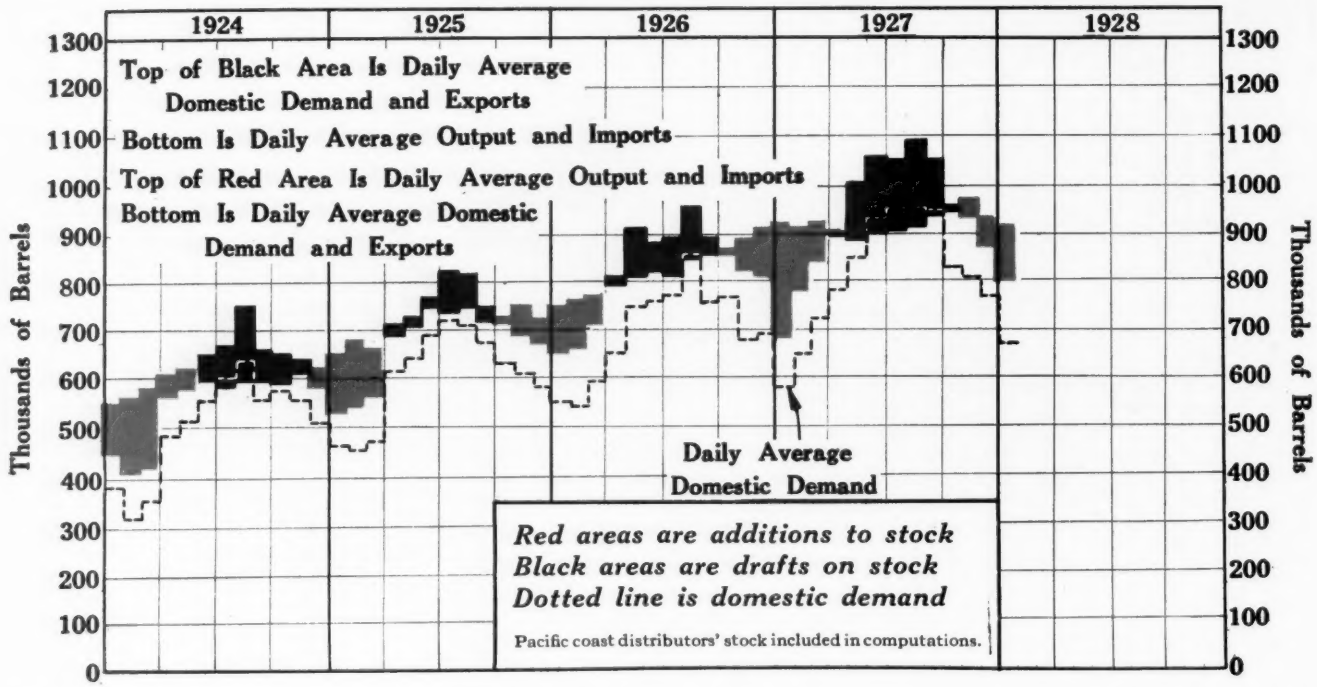
GASOLINE
FROM COAST TO COAST
INDEPENDENT
OIL
MOTOR OIL

Omar Refining Company

Roberts Building

Tulsa, Oklahoma

Gasoline Production and Consumption



January domestic output	899,000 Bbls. daily av.	January exports	120,000 Bbls. daily av.
January imports	18,000 Bbls. daily av.		
Total new supply	917,000 Bbls. daily av.	Total indicated demand	795,000 Bbls. daily av.
January domestic shipments	675,000 Bbls. daily av.	Stocks Jan. 31, 1928	36,112,000 Bbls.
		Increase in stocks in January	3,789,000 Bbls.
		Stocks Jan. 31, 1927	46,058,000 Bbls.

at the December rate of foreign and domestic demand. The 527,704,000 barrels of stocks on hand Jan. 31, 1927, was 224.2 days' supply at the rate of demand then current.

Production of crude oil continued its downward trend in the Seminole field. Seminole net production totaled 10,419,000 barrels in January, a daily average of 336,000 barrels, which was 62,000 barrels less than the December daily average of 398,000 barrels. All Oklahoma production fell only 43,600 barrels daily average to 676,000 barrels daily.

Production in inland Texas rose 1,200 barrels daily average to 508,000 barrels daily. Panhandle at 76,000 barrels daily average was off 8,000 barrels from the December average. Production in Gulf Coastal Texas fell 15,000 barrels daily average to 104,200 barrels daily because of a cessation of development, particularly in the Spindletop pool.

California production rose 2,900 barrels daily average to 613,800 barrels daily. Seal Beach production was off 1,000 barrels daily average but Long Beach was up 3,000 barrels daily.

Kansas production increased 2,600 barrels daily average to 107,900 barrels daily. Wyoming was down 3,200 barrels daily. Elsewhere there were only small fluctuations from the December recovery averages.

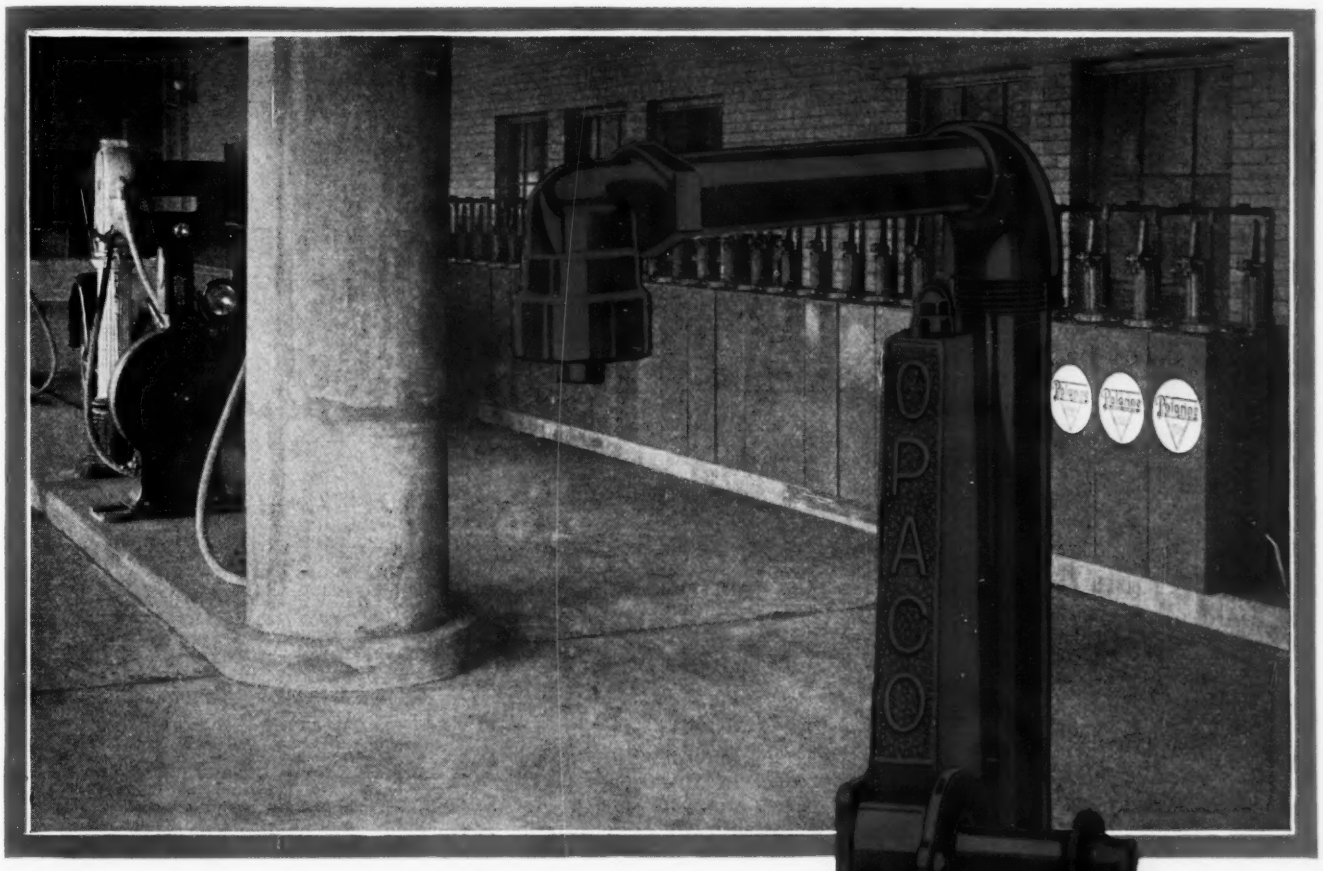
The entire Mid-Continent field produced 1,423,900 barrels of crude in January, compared with 1,467,000

Petroleum Supply and Demand—Barrels

	Jan. 1928	Dec. 1927	Nov. 1927	Jan. 1927
Domestic Crude production: Light	64,266,000	65,784,000	65,378,000	61,324,000
Heavy	8,055,000	8,324,000	8,400,000	10,151,000
Imports of crude oil	6,145,000	6,209,000	5,339,000	4,514,000
Imports of refined oil	1,165,000	755,000	1,159,000	1,189,000
Natural gasoline	3,426,000	3,512,000	3,410,000	3,145,000
Benzol	226,000	212,000	205,000	217,000
Total new supply of all oils	83,283,000	84,796,000	83,891,000	80,540,000
Total stocks end of preceding month	584,184,000	582,649,000	577,427,000	520,097,000
Total supply of all oils	667,467,000	667,445,000	661,318,000	600,637,000
Exports of crude oil	1,232,000	1,717,000	1,280,000	1,204,000
Exports of refined oil	11,738,000	9,863,000	10,641,000	10,062,000
Domestic demand, crude and refined	58,195,000	71,681,000	66,748,000	61,667,000
Total demand	71,165,000	83,261,000	78,669,000	72,933,000
Total stocks of all oils end of month	596,302,000	584,184,000	582,649,000	527,704,000
Days' supply	259.7	217.4	222.2	224.2
Increase in stocks	12,118,000	1,535,000	5,222,000	7,068,000
Daily average new supply	2,687,000	2,735,000	2,796,000	2,598,000
Daily average demand	2,296,000	2,686,000	2,622,000	2,353,000
Daily average excess of supply	391,000	49,000	174,000	245,000
Crude stocks:				
East of California: Light	309,482,000	303,639,000	300,475,000	230,872,000
Heavy	49,410,000	48,007,000	48,410,000	48,100,000
In California: Light	20,493,000	20,058,000	21,191,000	31,017,000
Heavy	94,327,000	91,797,000	92,555,000	87,971,000
Total stocks of crude	473,712,000	463,501,000	462,631,000	397,960,000
Total stocks of refined	121,850,000	119,949,000	119,198,000	129,184,000
Stocks of natural gasoline	740,000	734,000	820,000	560,000

Gasoline Supply and Demand—Barrels

	Production	Imports	Exports	Domestic Shipments	Stocks End of Month
January, 1927	27,960,000	520,000	3,557,000	17,888,000	46,058,000
February	25,024,000	416,000	3,544,000	18,240,000	49,714,000
March	27,886,000	493,000	3,219,000	22,646,000	52,410,000
April	26,577,000	377,000	3,614,000	23,371,000	52,379,000
May	26,787,000	490,000	4,468,000	26,579,000	48,609,000
June	26,616,000	590,000	4,248,000	27,799,000	43,768,000
July	28,118,000	190,000	3,223,000	29,784,000	39,069,000
August	28,010,000	348,000	4,193,000	29,779,000	33,455,000
September	27,716,000	515,000	3,539,000	28,409,000	29,738,000
October	28,903,000	365,000	3,959,000	25,497,000	29,550,000
November	28,558,000	417,000	3,724,000	24,400,000	30,401,000
December	28,512,000	282,000	3,154,000	23,718,000	32,323,000
1927 Total	330,667,000	5,003,000	44,442,000	297,928,000	.....
January, 1928	27,879,000	562,000	3,713,000	20,939,000	36,112,000



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The non-drip nozzle throws a solid stream without bubble or foaming.

Leading oil companies are standardizing on this new OPACO Master Pump Unit. Write for full information.

OIL PRODUCTS APPLIANCE CO.
MAYWOOD, ILLINOIS

Tanks thoroughly and effectively braced at center of gravity of pressure. Tank positively guaranteed against bulge or inaccurate measure of gauge stick.

Furnished in any paint scheme customers desire.

OPACO

Natural Gasoline and Motor Blends — Barrels

Districts	Daily Avg. Production Jan. (net)	Daily Avg. Production Dec. (net)	Stocks End of January	Stocks End of December	Motor Fuel Blends Made in January	Motor Fuel Blends Made in December	Stocks of Blends End of January	Stocks of Blends End of December	Districts
Appalachian	8,141	7,680	93,310	77,143	4,810	5,452	5,857	6,333	Appalachian
Ind., Ill., etc.	998	998	6,785	6,690	1,952	1,976	357	357	Ind., Ill., etc.
Okla., Kans., etc.	41,397	44,009	375,524	372,262	109,548	116,857	15,190	19,095	Okla., Kans., etc.
Texas	20,123	20,737	183,428	209,262	18,738	20,905	3,476	3,310	Texas
La. and Ark.	5,146	5,223	39,143	27,667	8,809	12,571	1,119	1,167	La. and Ark.
Rocky Mountain	2,548	2,152	10,500	11,095	.....	762	2,953	2,095	Rocky Mountain
Total east of Calif.	78,263	80,799	708,690	704,119	143,857	158,523	28,952	32,357	Total east of Calif.
California	32,258	32,488	31,238	30,333	.....	.....	.....	214	California
U. S. Total	110,521	113,287	739,928	734,452	.....	.....	28,952	32,571	U. S. Total

Gasoline Situation by Districts — Barrels

Districts	January Daily Avg. Output	December Daily Avg. Output	January Change %	January Daily Avg. Shipments	December Daily Avg. Shipments	January Change %	Stocks January 1928	Stocks December 1927	Stocks January 1927	Districts
East Coast	133,934	137,451	— 2.56	106,032	131,419	—19.32	5,613,000	4,748,000	8,465,000	East Coast
Appalachian	35,677	36,032	— 0.98	29,258	29,161	+ 0.33	1,234,000	1,035,000	1,047,000	Appalachian
Ind., Ill., etc.	124,484	134,451	— 7.41	95,935	118,871	—19.29	4,619,000	3,734,000	5,358,000	Ind., Ill., etc.
Okla., Kans., etc.	141,516	148,064	— 4.42	124,613	133,388	— 7.04	3,507,000	2,983,000	3,756,000	Okla., Kans., etc.
Texas	191,129	190,258	+ 0.46	181,935	181,742	+ 0.11	5,174,000	4,889,000	6,718,000	Texas
Louisiana and Ark.	65,484	63,968	+ 2.37	52,129	61,806	—15.66	1,905,000	1,491,000	3,520,000	Louisiana and Ark.
Rocky Mountain	38,968	38,452	+ 1.34	26,322	28,548	— 7.80	2,035,000	1,643,000	4,510,000	Rocky Mountain
California	168,129	171,065	— 1.72	160,871	172,806	— 6.91	12,025,000	11,800,000	12,684,000	California
U. S. Total	899,321	919,741	— 2.22	777,095	857,741	— 9.40	36,112,000	32,323,000	46,058,000	U. S. Total
Texas Gulf Coast	152,581	149,290	+ 2.20	146,064	140,516	+ 3.95	4,399,000	4,197,000	6,140,000	Texas Gulf Coast
La. Gulf Coast	52,032	50,322	+ 3.40	39,322	47,709	—17.58	1,807,000	1,413,000	3,446,000	La. Gulf Coast

Crude Production—Barrels

(Daily Averages)

States	Jan. 1928	Dec. 1927	Jan. 1927
Arkansas	88,100	90,600	131,600
California	613,800	610,900	651,100
Colorado	7,100	7,000	7,500
Illinois	16,400	17,100	18,900
Indiana	2,500	2,400	2,100
Kansas	107,900	105,300	116,100
Kentucky	17,500	17,900	16,400
Louisiana Inland	43,900	45,500	51,500
Gulf Coast	12,800	10,000	9,500
Michigan	1,000	1,100	900
Montana	11,900	11,100	13,300
New Mexico	2,500	2,600	4,300
New York	6,000	6,100	5,500
Ohio	18,100	18,200	18,700
Oklahoma	676,000	719,600	596,700
Pennsylvania	24,600	25,200	23,200
Tennessee	100	100	200
Texas Inland	508,000	506,800	420,500
Gulf Coast	104,200	119,200	144,300
West Virginia	14,900	15,100	15,000
Wyoming	55,600	58,800	58,300
Total U. S.	2,332,900	2,390,600	2,305,600

Crude Production by Fields

(Barrels)

Fields	January Daily Av. 1928	December Daily Av. 1927	January Daily Av. 1927
Appalachian	77,400	78,700	74,800
Lima-Indiana	4,000	4,200	4,500
Michigan	1,000	1,100	900
Ill., S. W. Indiana	18,700	19,200	20,700
Mid-Continent	1,423,900	1,467,800	1,316,400
Gulf Coast	117,000	129,200	153,800
Rocky Mountain	77,100	79,500	83,400
California	613,800	610,900	651,100
U. S. Total	2,332,900	2,390,600	2,305,600

Crude Oil Stocks—By Months

(Thousands of Barrels)

1927	East of Calif.	†In Calif.	Total U. S.
January	278,972	118,988	397,673
February	285,458	117,410	402,868
March	290,110	117,454	407,564
April	297,895	117,843	415,738
May	307,016	117,432	424,448
June	315,702	117,414	433,116
July	324,930	116,996	441,926
August	333,673	115,227	448,900
September	339,741	114,981	454,722
October	345,357	113,467	458,824
November	348,885	113,746	462,631
December	351,646	111,855	463,501
1928			
January	358,892	114,820	473,712

†Includes heavy fuels.

barrels in December, and 1,316,400 barrels in January, 1927. The gain in production from one January to the other was 8.2 per cent. Production for the whole country in January, 1928, was 27,300 barrels daily average more than in January, 1927, or 1.2 per cent.

The largest increases in crude oil stocks east of California were in Oklahoma and Kansas refining group and in Oklahoma, Kansas and inland Texas pipe lines and tank farms. In the Mid-Continent outside of north Louisiana and Arkansas were 231,540,000 barrels of crude oil Jan. 31, 1928, or 48.87 per cent of the country's crude supply. California held 114,820,000 barrels or 24.23 per cent. In these two large producing fields was 73.1 per cent of the company's crude.

On the Gulf coast was 33,538,000 barrels or 7.07 per cent of the supply. On the Atlantic coast was 12,145,000 barrels of crude or 2.56 per cent of the country's above ground crude supply Jan. 31. That leaves a remainder of 17.27 per cent distributed over the rest of the country, principally in the Rocky Mountain and Indiana-Illinois regions.

Imports of crude oil were slightly less in January than in December, averaging 198,200 barrels daily compared 200,300 barrels daily in December. Receipts from Mexico continued to fall, averaging only 39,000 barrels, compared with 42,800 barrels daily in December. Venezuelan crude receipts averaged 105,900 barrels daily, compared with 113,200 barrels daily in December.

Crude receipts from Colombia were slightly larger at 36,800 barrels average a day. Receipts from other countries, not specified in the bureau's report, averaged 16,500 barrels daily, compared with 9,600 barrels in December.

In January, 1927, daily average crude imports were 65,800 barrels from Mexico, 42,600 from Venezuela and 27,100 from Colombia.

Movement of crude from California to eastern ports of the United States totaled 234,000 barrels, less than 30

Stocks of Crude Oil

Domestic, Unless Otherwise Specified. Amounts in Thousands of Barrels.

AT REFINERIES

Districts	Jan. 1928	Dec. 1927	Jan. 1927
East Coast:			
Domestic	8,569	8,690	7,315
Foreign	3,491	2,686	2,164
Appalachian	1,883	1,871	1,597
Indiana, Illinois, etc.	2,812	2,777	2,284
Oklahoma, Kansas, etc.	5,655	4,871	3,135
Texas: Inland	1,484	1,432	1,094
Texas: Gulf Coast			
Domestic	8,006	7,686	8,133
Foreign	153	219	152
Ark. and Inland La.	441	408	553
Louisiana Gulf Coast:			
Domestic	5,886	6,149	6,787
Foreign	1,289	1,046	722
Rocky Mountain	1,498	1,400	1,608
U. S. east of Calif.	41,167	39,235	35,544

AT TANK FARMS, IN PIPE LINES AND ELSEWHERE THAN REFINERIES

Appalachian	6,148	6,285	6,319
Kentucky	1,048	1,041	1,116
Lima-Indiana	1,128	1,134	667
Ill., S. W. Indiana	12,122	12,170	11,887
Okla., Kans., Tex., except coastal	225,885	221,558	147,209
N. La.-Ark.	25,817	25,373	30,089
Gulf Coast	18,161	17,526	18,156
Rocky Mountain	27,288	27,235	27,474
East of Calif. pipe line tank farm stocks	317,597	312,322	242,917
Foreign Crude:			
Atlantic ports	85	52	84
Gulf ports	43	37	427
Total refinery, pipe line and tank farm stocks east of Calif.	358,892	351,646	278,972
California:			
20° and lighter	20,493	20,058	31,017
Heavier than 20°	94,327	91,797	87,971
Grand Total	473,712	463,501	397,960

CLASSIFICATION BY GRAVITY

(Elsewhere than refineries east of California)

24° lighter	309,482	303,639	230,013
Heavier than 24°	49,410	48,007	48,959

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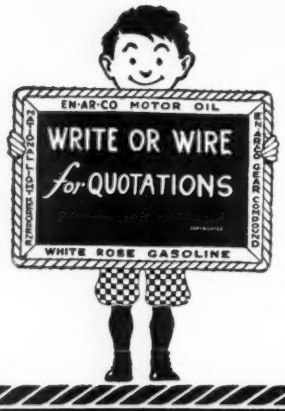

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PUMPS AND TANKS FOR THE OIL TRADE
SPRINGFIELD MASS. U.S.A.

Kerosene, Lubes, Wax, Fuel and Gas Oils

	Production	Imports	Exports	Domestic Shipments	Stocks End of Month
KEROSENE (Bbls.)					
January, 1927	5,113,000	.....	1,616,000	3,882,000	8,190,000
February	4,453,000	1,000	1,399,000	2,590,000	8,655,000
March	4,802,000	3,000	1,351,000	3,356,000	8,753,000
April	4,608,000	1,000	1,861,000	2,776,000	8,725,000
May	4,663,000	1,000	1,633,000	3,188,000	8,568,000
June	4,308,000	2,000	1,616,000	2,695,000	8,567,000
July	4,484,000	.....	1,376,000	2,637,000	9,038,000
August	4,420,000	4,000	1,700,000	3,389,000	8,373,000
September	4,686,000	.....	1,659,000	3,280,000	8,120,000
October	4,884,000	1,000	2,211,000	3,469,000	7,325,000
November	4,824,000	27,000	1,821,000	2,514,000	7,841,000
December	4,869,000	15,000	1,237,000	3,819,000	7,669,000
1927 Total	56,114,000	55,000	19,480,000	37,595	.....
January, 1928	5,047,000	46,000	2,350,000	2,742,000	7,670,000
LUBRICANTS (Bbls.)					
January, 1927	2,570,000	†1,000	864,000	1,496,000	7,867,000
February	2,345,000	.....	620,000	1,231,000	8,361,000
March	2,754,000	†1,000	895,000	2,334,000	8,035,000
April	2,615,000	1,000	763,000	1,712,000	8,176,000
May	2,625,000	1,000	863,000	1,928,000	8,011,000
June	2,571,000	1,000	758,000	2,197,000	7,628,000
July	2,672,000	.....	993,000	1,811,000	7,496,000
August	2,752,000	1,000	754,000	2,004,000	7,491,000
September	2,782,000	.....	861,000	1,965,000	7,447,000
October	2,757,000	1,000	839,000	1,782,000	7,584,000
November	2,477,000	.....	798,000	1,739,000	7,524,000
December	2,801,000	.....	802,000	1,663,000	7,860,000
1927 Total	31,721,000	7,000	9,810,000	21,634,000	.....
January, 1928	2,658,000	.....	934,000	1,606,000	7,978,000
WAX (Pounds)					
January, 1927	54,114,000	460,000	29,228,000	17,842,000	192,835,000
February	47,363,000	2,048,000	23,623,000	20,171,000	198,452,000
March	53,644,000	910,000	28,205,000	23,461,000	201,340,000
April	48,917,000	1,505,000	25,421,000	15,322,000	211,019,000
May	46,267,000	729,000	25,228,000	25,458,000	207,329,000
June	44,938,000	400,000	24,200,000	29,659,000	198,808,000
July	47,979,000	2,789,000	25,970,000	32,105,000	191,501,000
August	41,576,000	2,656,000	34,229,000	20,859,000	180,645,000
September	47,888,000	3,040,000	31,780,000	29,621,000	170,172,000
October	49,476,000	887,000	28,342,000	21,826,000	170,367,000
November	48,146,000	3,132,000	32,541,000	17,404,000	171,700,000
December	54,039,000	1,906,000	30,569,000	29,862,000	167,214,000
1927 Total	584,347,000	20,462,000	339,336,000	283,590,000	.....
January, 1928	55,320,000	1,117,000	39,712,000	15,039,000	168,900,000
GAS and FUEL OILS (Bbls.)					
January, 1927	32,936,000	660,000	3,732,000	.....	*23,195,000
February	30,185,000	1,053,000	3,812,000	.....	*22,099,000
March	32,377,000	525,000	3,657,000	.....	*22,561,000
April	31,856,000	805,000	3,325,000	.....	*23,732,000
May	33,499,000	826,000	4,544,000	.....	*26,059,000
June	31,691,000	851,000	4,278,000	.....	*26,590,000
July	33,693,000	849,000	4,047,000	.....	*28,890,000
August	34,098,000	391,000	4,639,000	.....	*30,346,000
September	32,339,000	341,000	3,258,000	.....	*31,631,000
October	34,045,000	667,000	4,206,000	.....	*33,191,000
November	32,594,000	704,000	4,013,000	.....	*33,637,000
December	33,029,000	451,000	3,828,000	.....	*31,982,000
1927 Total	392,342,000	8,123,000	47,339,000	.....	.....
January, 1928	32,271,000	553,000	4,175,000	.....	*29,623,000

*These stocks for east of California only.
†Revised.

per cent of the December movement.

Production of gasoline at refineries averaged only 899,300 barrels daily in January. This was the smallest average output since last June when the 887,200 barrels daily was produced. Production in January averaged 20,400 barrels daily less than production in December, a decline of 2.22 per cent. Output was increased in only the Rocky Mountain and Gulf Coastal refineries. Shipments were larger in January than in December from Texas Gulf Coastal and Appalachian refineries, but stocks increased in every refining district.

Gasoline stocks were lower Jan. 31, 1928, in all but the Appalachian of the refining groups into which the Bureau of Mines subdivides the country. In the Appalachian group stocks were 187,000 barrels larger at the end of January than a year before. From Jan. 31, 1927 to Jan. 31, 1928, the Rocky Mountain plants had reduced their gasoline stocks more than 50 per cent. California stocks were 659,000 barrels less at 12,025,000 barrels but formed 33.39 per cent of the stocks in the whole country Jan. 31. A year before the 12,684,000 barrels of California gasoline stocks formed only 26.1 per cent of the country's reserve gasoline supply.

Atlantic seaboard stocks of gasoline declined 2,852,000 barrels or 33.69 per cent. Oklahoma-Kansas stocks fell 249,000 barrels to 3,507,000 barrels, or 6.62 per cent. Stocks at Gulf Coastal plants were lowered 3,380,000 barrels or 35.25 per cent.

Imports of gasoline in January, which totaled 562,000 barrels, were the largest since last June. Exports were slightly larger than December exports but smaller than November exports.

The Jan. 31 stocks were equivalent to 45.4 days' supply at the January rate of foreign and domestic demand. Stocks Dec. 31, 1927, and Jan. 31, 1927, were 37.2 and 66.5 days' supply, respectively, at the rate of demand then current.

Production of natural gasoline was decreased 2,766 barrels daily aver-

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Kerosene Situation by Districts — Barrels

Districts	January Daily Avg. Output	December Daily Avg. Output	January Change %	January Daily Avg. Shipments	December Daily Avg. Shipments	January Change %	Stocks January 1928	Stocks December 1927	Stocks January 1927	Districts
East Coast	27,516	27,742	— 0.81	25,516	32,774	—22.14	1,463,000	1,401,000	1,566,000	East Coast
Appalachian	9,032	9,516	— 5.09	9,322	9,000	+ 3.58	307,000	316,000	238,000	Appalachian
Ind., Ill., etc.	15,903	16,387	— 2.95	18,290	14,064	+30.05	930,000	1,004,000	870,000	Ind., Ill., etc.
Okla., Kans., etc.	27,290	25,032	+ 9.02	24,258	22,934	+ 5.77	699,000	605,000	636,000	Okla., Kans., etc.
Texas	40,548	41,516	— 2.33	44,064	47,936	— 8.08	1,213,000	1,322,000	1,768,000	Texas
Louisiana and Ark.	16,258	18,322	—11.26	12,097	16,806	—28.02	1,066,000	937,000	994,000	Louisiana and Ark.
Rocky Mountain	5,097	4,936	+ 3.26	3,129	2,226	+40.57	411,000	350,000	452,000	Rocky Mountain
California	21,162	13,613	+55.45	26,097	16,871	+54.69	1,581,000	1,734,000	1,666,000	California
U. S. Total	162,806	157,064	+ 3.66	162,773	162,611	+ 0.09	7,670,000	7,669,000	8,190,000	U. S. Total
Texas Gulf Coast	33,451	34,193	— 2.17	36,806	39,968	— 8.59	1,132,000	1,236,000	1,344,000	Texas Gulf Coast
La. Gulf Coast	14,225	16,290	—12.68	9,709	14,839	—34.57	1,051,000	911,000	979,000	La. Gulf Coast

Lubricants Situation by Districts — Barrels

Districts	January Daily Avg. Output	December Daily Avg. Output	January Change %	January Daily Avg. Shipments	December Daily Avg. Shipments	January Change %	Stocks January 1928	Stocks December 1927	Stocks January 1927	Districts
East Coast	28,161	30,645	— 8.11	25,709	27,193	— 5.46	2,705,000	2,629,000	2,684,000	East Coast
Appalachian	11,935	11,774	+ 1.36	12,193	10,742	+13.50	1,087,000	1,095,000	971,000	Appalachian
Ind., Ill., etc.	9,968	11,065	— 9.91	7,774	9,129	—14.84	908,000	840,000	750,000	Ind., Ill., etc.
Okla., Kans., etc.	6,032	5,935	+ 1.63	5,516	4,612	+19.60	528,000	512,000	438,000	Okla., Kans., etc.
Texas	19,806	20,935	— 5.39	19,484	19,355	+ 0.66	1,681,000	1,671,000	1,864,000	Texas
Louisiana and Ark.	1,742	2,226	—21.74	1,355	1,806	—24.97	126,000	114,000	122,000	Louisiana and Ark.
Rocky Mountain	1,581	1,710	— 7.54	1,097	1,226	—10.52	142,000	127,000	157,000	Rocky Mountain
California	6,516	6,064	+ 7.45	8,806	5,452	+61.52	801,000	872,000	901,000	California
U. S. Total	85,741	90,354	— 5.10	81,934	79,515	+ 2.36	7,978,000	7,860,000	7,887,000	U. S. Total
Texas Gulf Coast	18,838	19,806	— 4.88	18,516	18,645	— 0.69	1,616,000	1,606,000	1,828,000	Texas Gulf Coast
La. Gulf Coast	1,645	2,193	—24.99	1,290	1,806	—28.57	124,000	113,000	122,000	La. Gulf Coast

Gas and Fuel Oil Situation by Districts — Barrels

Districts	January Daily Avg. Output	December Daily Avg. Output	January Change %	January Daily Avg. Shipments	December Daily Avg. Shipments	January Change %	Stocks January 1928	Stocks December 1927	Stocks January 1927	Districts
East Coast	223,258	230,226	— 3.03	244,097	217,161	+12.40	10,563,000	11,209,000	6,242,000	East Coast
Appalachian	19,709	18,484	+ 6.63	20,839	18,387	+13.34	1,033,000	1,068,000	846,000	Appalachian
Ind., Ill., etc.	71,903	66,548	+ 8.05	79,000	82,806	— 4.60	1,214,000	1,434,000	1,012,000	Ind., Ill., etc.
Okla., Kans., etc.	91,161	89,064	+ 2.35	113,355	116,839	— 2.98	4,517,000	5,205,000	4,272,000	Okla., Kans., etc.
Texas	190,161	198,581	— 4.24	224,194	229,516	— 2.32	7,672,000	8,727,000	7,579,000	Texas
Louisiana and Ark.	81,516	74,935	+ 8.78	73,193	66,484	+10.09	3,939,000	3,681,000	2,291,000	Louisiana and Ark.
Rocky Mountain	20,711	20,677	+ 0.16	19,839	20,710	— 4.21	685,000	658,000	953,000	Rocky Mountain
California	342,581	366,936	— 6.64	.....	.....	.....	.....	.....	.....	California
U. S. Total	1,041,000	1,065,451	— 2.29	1,117,096	1,118,839	— 0.15	29,623,000	31,982,000	23,195,000	U. S. Total
Texas Gulf Coast	143,322	148,613	— 3.56	172,387	180,968	— 4.74	6,103,000	7,004,000	6,438,000	Texas Gulf Coast
La. Gulf Coast	48,097	39,968	+20.34	41,161	31,226	+31.82	3,335,000	3,120,000	1,709,000	La. Gulf Coast

Coke, Asphalt, Miscellaneous Products

	Coke Output (Tons)	Coke Stocks (Tons)	Asphalt Output (Tons)	Asphalt Stocks (Tons)	Miscel. Products Output (Bbls.)	Miscel. Products Stocks (Bbls.)	Unfin. Oil Output (Bbls.)	Unfin. Oil Stocks (Bbls.)	Losses (Bbls.)	
January, 1927	92,914	287,394	191,180	215,337	511,000	1,189,000	2,473,000	39,287,000	2,367,000	January, 1927
February	88,102	294,682	172,685	234,450	546,000	1,282,000	2,729,000	38,986,000	2,091,000	February
March	98,163	325,521	222,309	235,251	525,000	1,356,000	2,412,000	39,392,000	2,369,000	March
April	88,404	318,529	273,767	219,502	561,000	1,410,000	1,978,000	38,095,000	2,237,000	April
May	87,900	329,400	319,000	222,500	599,000	1,368,000	1,809,000	37,760,000	2,599,000	May
June	95,300	293,100	347,100	232,400	677,000	1,180,000	2,283,000	38,192,000	2,487,000	June
July	90,400	305,800	334,700	214,100	747,000	928,000	2,490,000	39,647,000	2,516,000	July
August	94,800	303,600	339,500	192,200	743,000	879,000	1,955,000	38,711,000	2,598,000	August
September	97,500	313,500	333,100	176,300	634,000	863,000	1,811,000	36,962,000	2,453,000	September
October	101,600	331,300	332,600	189,400	663,000	960,000	1,977,000	35,874,000	2,405,000	October
November	102,300	349,200	290,000	196,200	606,000	1,120,000	2,121,000	35,209,000	2,145,000	November
December	107,800	345,100	262,600	220,800	593,000	1,221,000	2,435,000	35,314,000	2,062,000	December
1927 Total	1,145,183	.....	3,418,541	.....	7,405,000	.....	26,473,000	.....	28,329,000	1927 Total
January, 1928	103,000	330,400	198,900	209,300	613,000	1,176,000	2,297,000	35,777,000	2,128,000	January, 1928

Daily Average Runs to Stills — All Oils — Barrels

	East Coast	Appala.	Ind.-Ill.	Okla.-Kans.	Texas	La.-Ark.	Rocky Mt.	Calif.	Total U. S.	
January, 1927	408,355	82,581	206,226	278,258	517,160	228,516	103,161	616,516	2,440,774	January, 1927
February	412,714	86,928	197,785	295,964	504,642	228,107	103,321	633,108	2,462,571	February
March	439,387	83,097	209,161	283,548	479,806	224,903	103,290	597,839	2,421,032	March
April	411,367	84,400	204,067	286,067	491,567	224,400	100,500	615,333	2,417,701	April
May	413,516	82,000	226,677	293,581	494,806	212,129	75,839	618,452	2,417,000	May
June	429,967	85,400	238,067	301,733	490,633	199,933	87,300	605,733	2,438,766	June
July	439,871	80,935	250,387	317,129	482,839	199,194	87,226	633,032	2,490,613	July
August	465,839	86,065	237,194	319,516	481,032	202,226	76,032	618,516	1,486,420	August
September	453,000	87,100	225,667	327,300	483,900	211,600	71,700	637,467	2,497,733	September
October	475,580	91,161	229,677	307,774	513,419	204,968	80,871	617,937	2,521,387	October
November	471,667	84,200	246,100	298,667	515,533	197,900	89,800	619,733	2,523,600	November
December	467,226	83,484	250,516	292,355	494,806	199,226	87,354	592,710	2,467,677	December
January, 1928	450,064	84,613	247,097	288,645	482,613	202,064	85,935	570,161	2,411,193	January, 1928

age to 110,521 barrels average. Stocks Jan. 31 were 5,476 barrels more than end of December stocks. Production of blended motor fuels outside refineries was reduced almost 5,000 barrels in January and stocks on hand at blending plants were lowered more than 3,000 barrels.

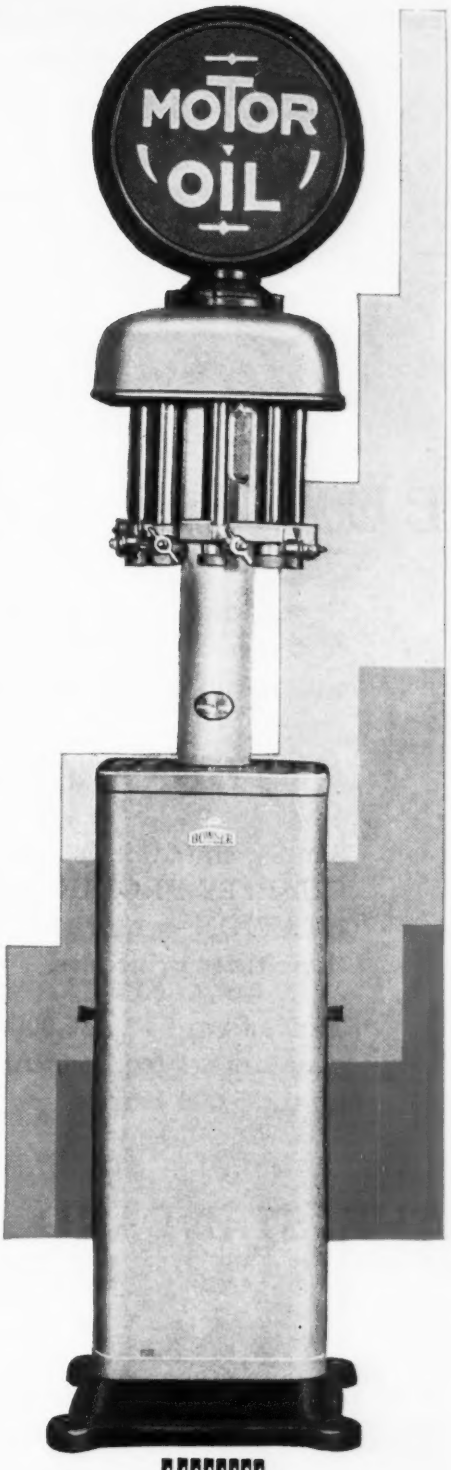
Kerosene production was increased 5,742 barrels daily average or 3.6 per cent to 162,806 barrels. Shipments increased only 162 barrels average to 162,611 barrels daily. Stocks increased approximately 1,000 barrels. The 7,670,000 barrels of stocks Jan. 31 represented 46.7 days' supply at the January rate of demand. The Dec. 31 stocks represented 47 days' supply at the December rate of demand.

A decline in domestic kerosene of 35,000 barrels daily average in January was more than offset by a rise of 36,000 barrels daily average in the export demand. January kerosene exports were the largest since August, 1926.

The increase in kerosene production was principally in California. A large gain was made in production in the Oklahoma-Kansas district and a smaller gain in the Rocky Mountain district.

Indicated shipments seem to be the exception to the saying that figures do not lie. The bureau's report shows

Increasing sales on your most profitable line



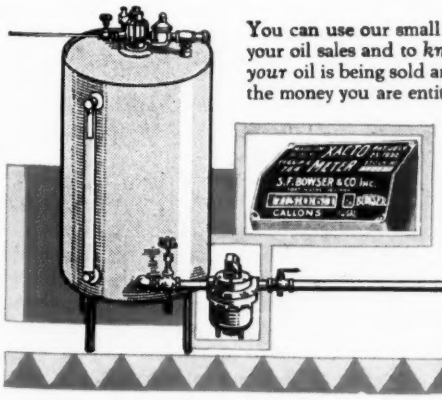
OIL yields you your largest net profits. It requires least investment and takes least time in service.

To stimulate oil sales, install a Bowser Oil Fountain. The experience of others *guarantees you* permanently increased gallonage—and immediate gains in gasoline sales, too!

With an Oil Fountain, increases of 35% to 50% in oil sales are common—and 10% to 50% better gasoline sales.

The coupon makes it easy to get the Oil Fountain story. Use it.

S.F.BOWSER & COMPANY, Inc.
Filling Station Equipment and Systems
1302 Creighton Avenue
FORT WAYNE, INDIANA, U.S.A.



You can use our small "Xacto" Meter to check your oil sales and to *know absolutely* that only *your* oil is being sold and that you are getting all the money you are entitled to. "Xacto" Meter, as used with the Oil Fountain, is an integral part of Bowser's complete system of auditing gas and oil —"guarded all the way!"

S. F. BOWSER & CO., INC.
1302 Creighton Ave.
Fort Wayne, Indiana

☐ Tell me about the Oil Fountain.
☐ Tell me about "Xacto" Meter.

Name.....

Address.....

BUILT TO A REPUTATION

Repeat orders and assurances from many satisfied customers that they are partial to STANDARD equipment should mean something to you.

THERE IS A REASON

Simply stated it is SERVICE, PRICE, and a QUALITY PRODUCT built to maintain a REPUTATION acquired from adhering strictly to these three principles.

Tanks from 65 to 25,000 gallons in stock to meet your storage requirements. Field erected storage up to 55,000 barrels.

THE STANDARD BOILER & PLATE IRON CO.
NILES, OHIO

NATURAL GASOLINE
Grades A · AA · B · BB · C
CONTRACT OR SPOT
WILLOCK OIL CORPORATION
First National Bank Building · Phone Atlantic 3110
PITTSBURGH, PA.
52 Years Experience · It Counts

that shipments were larger from every district except the Gulf Coastal and East Coast areas. The large volume of exports would indicate that shipments must have been nearly double December shipments. What probably happened was a drawing on inland plants for kerosene to replace at seaboard points the kerosene that was shipped overseas.

There were small increases in production of lubricating oils in the Appalachian, Oklahoma-Kansas, and California districts. Shipments also were larger in January than in December from these three districts and also from inland Texas. Stocks of lubricating oils were lowered in the Appalachian and California districts. There was a small gain in exports and a small falling off in domestic demand. Stocks rose 118,000 barrels and were 111,000 barrels larger than stocks Jan. 31, 1927.

Paraffin wax production was slightly larger than December production. Imports fell 789,000 pounds. Exports rose 9,143,000 pounds to 39,712,000 pounds and domestic demand fell 14,823,000 pounds to 15,039,000 pounds. Stocks rose 1,686,000 pounds to 168,900,000 pounds.

Production of fuel oil at refineries fell 2.29 per cent to 1,041,000 barrels daily average. Shipments from plants east of California fell 0.19 per cent to 1,117,096 barrels daily average. Stocks east of California were lowered 2,359,000 barrels to 29,623,000 barrels. Fuel oil exports in January were the largest since October.

The January report compiled under the supervision of H. R. Hopkins, was from 318 refineries which rated a daily crude capacity of 3,059,000 barrels which were operated at 72 per cent of their capacity. In December the same number of plants was being operated at 79 per cent of the combined rated capacity.

LOUISVILLE, March 9.—Lloyd Williams, colored, who shot and killed Herbert R. Porter, night manager of the Stoll Oil Refining Co.'s service station at 2600 West Chestnut St. will pay with his life, a jury in criminal court decided on March 3.

Mr. Porter, who was 41 years old, had closed and left the station for his home the night of Jan. 8 when a negro approached and announced he would walk with him. When Mr. Porter reached his home, the negro told him to put up his hands. Mr. Porter first put down the basket he was carrying, and, as he straightened up to put his hands up, the negro shot him.

OKLAHOMA CITY, March 10.—Continental Supply Co. has opened a division office in the Petroleum building here with R. D. Mannix in charge. The Continental recently purchased site for supply house at Marshall, Okla., to serve northern Logan county's deep drilling campaign.

Cities Service Leases Chicago Super Station to Individual

Staff Special
CHICAGO, March 10

CITIES SERVICE OIL CO.'S super service station in Chicago is being operated by a lessee, John J. Zazek. Its five departments are of gasoline and oil lubrication, automobile laundry, automobile supply store, and shop for minor car repairs.

Cities Service owns the land and built the building which looks like an investment of about $40,000. Mr. Zazek pays rent and buys his petroleum products from Cities Service Oil Co. He selected and bought his laundry machinery himself, likewise his shop equipment and merchandise he may wish to sell.

This station is the greatest departure from conventional filling station design in Chicago since Sinclair Refining Co. built its greasing palaces two or three years ago. Sinclair has not gone beyond oil, gasoline and lubrication departments. Sinclair operates its own places and Cities Service operates none in Chicago.

The retailing policy of Cities Service Oil Co. is probably the least complicated of any of the major companies doing business in Standard Oil Co. of Indiana territory. The company owns its own outlets or controls them with long term leases. It controls its own advertising at these outlets and it sells Cities Service products to its lessees at a stipulated discount under the prevailing retail price.

Cities Service fixes its own tank wagon price by written contracts, controls its posted filling station price through advertising and gives no quantity discounts. Their dealers pay for what they get, whether it is merchandise or rent. The rent proposition is a matter of barter in each case.

The super service station is on a triangular lot at Elston Ave., Webster and Wood Sts. This lot has been a filling station site for a long time. Business was not suspended while the new building was being constructed. Gasoline gallonage at the new station has been nearly double the gallonage of the old although weather has been cold.

The station is in the heart of an industrial district although it faces a boulevard, Elston avenue. Last summer the patronage was about half and half, trucks and passanger cars. The increase in patronage has been almost wholly passenger cars, Mr. Zazek said.

The lot is 154 x 110 x 105 feet. The shortest side is the one behind the white tile station building which is 73 x 24 feet.

The only color about the station comes from the green gasoline in two of the four 10-gallon visible pumps on islands in front of the building. There is no canopy. The steel window frames and the heavy push-up doors are painted black. The lot is covered with white chat. There are three drives, each 46 feet wide. In its drab surroundings this white station is conspicuous.

L. C. H. Groeger, real estate and lease man for the Cities Service Oil Co., who also is an electrical engineer, planned this lay-out.

The back wall of the office is shelved and stocked with automobile supplies and packaged goods; no merchandise except that which may be used by the motorist.

The greasing pits really are not pits, but runways across a spacious, concrete basement. The runways are 12 x 4-inch channel irons reinforced with I-beams and supported by steel columns. Not all similar installations are built so strong, but this one is in the region of heavy truck traffic and some of the station's best customers are heavy machines. The doors are large enough to admit 75 per cent of the trucks in use. A furniture van cannot get inside.

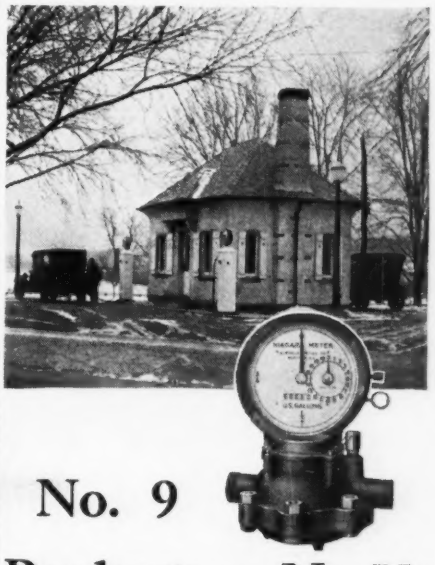
The roof has a skylight and the doors are half glass so there is plenty of daylight with the doors closed for all the work that has to be done above ground. At each end of each greasing rack is a 150-watt light in a vapor proof case.

Waste crankcase oil drains into a funnel fastened on a pipe with swivel joints. The oil flows by gravity to a 300-gallon storage tank.

Mr. Zazek employs four men: one to sell gasoline and oil; two to work on the grease pits, and one car washer. The automobile laundry is of the cold water and air pressure type, costing approximately $600. The whole establishment is heated with two kerosene stoves; one in the office and the other in the laundry.

AMARILLO, Tex., March 8.—G. P. Milton, land man and scout for The Texas Co. at Amarillo, has resigned to enter business as an individual operator. He is succeeded by W. T. Calhoun, who has been at Lubbock, Tex., for the company. The Texas Co. is moving its offices from Amarillo to Kings Mill.

NIAGARA METER TRAVELS



No. 9

Rochester, N. Y.

DURING the past two years a radical change has been taking place in gasoline retailing methods. The increasing numbers of automobiles and the keen competition which is being encountered by retail gasoline stations throughout the country, has demanded a speedier and more efficient method of handling gasoline sales. And, Niagara Oil Meters have met that demand! Today, modern meter dispensing systems are fast replacing those of the slow, hand operated type.

Not only do Niagara Meters assure customers of speedier service and more accurate measurement, but they also provide the service station with an accurate record of the day's sales.

The attractive service station pictured above is one of the many which is owned and operated by one of the largest independent oil companies in the vicinity of Rochester, New York. This company installed their first battery of Niagara Metered pumps two years ago, and today every one of their stations is so equipped.

* * * *

Speed . . . Accuracy . . . Dependability! These are the three fundamentals of Niagara Oil Meters. No matter what the petroleum product to be measured may be, Niagara Oil Meters assure you of these three things at all times. Mail the coupon for full information and booklet.

BUFFALO METER COMPANY
2889 Main St. - Buffalo, N. Y.

Niagara Oil Meters

Have you sent for your free copy of our new booklet?

The coupon will bring you one. Mail it today!

Mail this *coupon Now!*

Buffalo Meter Co., 2889 Main St., Buffalo, N. Y.

Please send us a copy of your new Niagara Oil Meter Booklet.

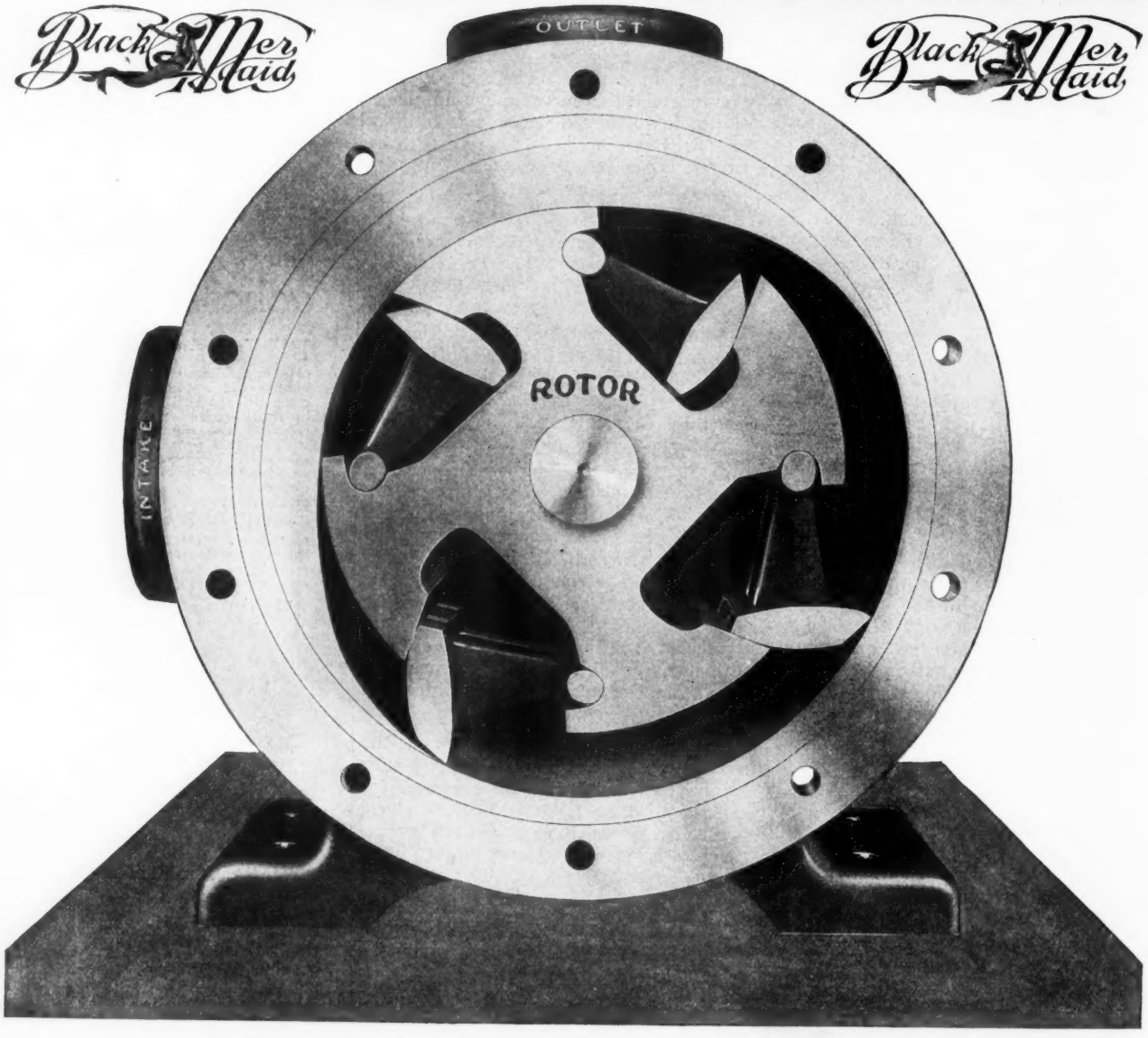
Name.....

Type of Business.....

Address.....

After 26 Years—th
This Blackmer Pu

Blackmer Maid



Blackmer Maid

Automatic-Take-Up-For-Wear

The cut on this page gives a clear and comprehensive view of the interior construction of a Blackmer Rotary Pump, consisting of a cylinder, rotor and buckets.

During operation, the buckets follow the contour of the cylinder in a counter clockwise direction, drawing liquid in at intake and pushing it out at outlet.

The rotor revolves with the shaft, causing the buckets to hold out againt the cylinder by centrifugal force and gravity. This exhausts the air from the suction or intake line, allowing the atmospheric pressure to force the liquid into the pump. The liquid is forced out of the outlet, as it cannot carry by the discharge port due to the close fit between the rotor and cylinder. Liquid remaining in the rotor recess is of course carried by and acts as a seal keeping the pump primed.

Blackmer Pu

1809 Century Ave., Grand R

the Supremacy of Principle Remains Unchallenged

Down through the years, the Blackmer Pump Co. has kept pace with the demands of the oil industry.

The leadership established 26 years ago when Blackmer Pumps were first marketed to the petroleum industry, has been maintained. Blackmer engineers have been constantly on the alert to build into Blackmer Pumps the most modern and up to date mechanical and electrical improvements.

The Blackmer Pump of today is a vastly better pump than the first Blackmer ever built. Manufacturing methods have improved. Tolerances have been reduced. Metals are more durable. Refinements of design and construction have greatly improved the performance of the pump. Continual testing and experiment has lengthened its life. The lessons that can be learned only from years of experience have not been ignored.

Yet, the Blackmer Principle is the same. It is right today just as it was right 26 years ago.

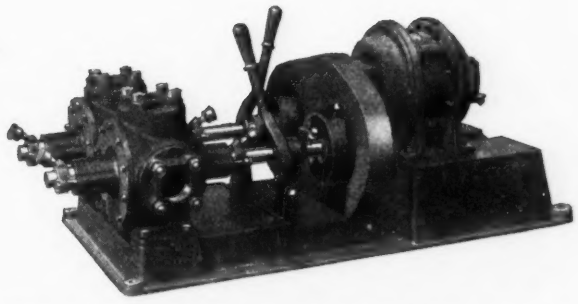
On this page are shown two new Blackmer Unloading Units designed especially for Oil Jobber's service. Due to ever increasing production on this type of unit, we have been able to reduce costs considerably. The saving is passed along to the purchaser.

Ask for a copy of the New Blackmer Catalog

It is just off the press. Describes in detail the complete line of Blackmer Pumps. Contains much information of value to anyone interested in pumps and their installation.

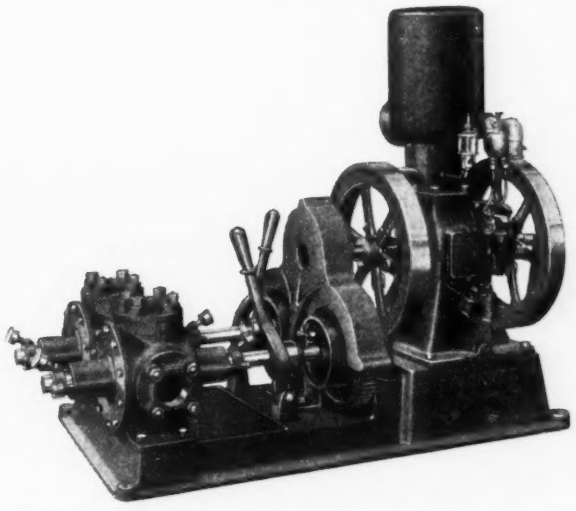
Pump Co.

Grand Rapids, Michigan



Double Electric Unloading Unit

This is the new Blackmer Double Electric Unloading Unit designed especially for Oil Jobbers. Pumps can be 50, 100 or 200 g.p.m. capacity, with any suitable motor. Pumps of 100 g.p.m. capacity and larger are furnished with flanged couplings at no additional charge.



Double Engine Unloading Unit

Similar to the electric unit above, except for extended base for building of brick firewall between the engine and the pumps which is furnished at no extra charge.

Get our prices on these units.

Profits from Contented Compressors

Majority of Troubles with Gas Compressor Plants Due to Inexperience in Installing and Operating. Practical Helps for Cutting "Down" Time

*By E. W. Jordan**

FROM many years' experience in "trouble shooting" on gas engine driven compressor plants, Mr. Jordan offers the accompanying article, which is exclusive to NATIONAL PETROLEUM NEWS, *on where troubles develop with these units in oil field use and how plant shutdowns, with loss of production and so on, may be reduced.*

He is writing for four classes of individuals, who are together responsible for the equipment giving the longest life possible; manufacturer, purchaser, erecting engineer and plant operator. Mr. Jordan has promised to contribute other articles on gas engine problems in the future.

A GAS engine driven compressor should be so designed it will operate, under normal conditions, 24 hours per day for months without a moment's shutdown and reputable engine and compressor builders are striving to attain this very object. It is the shutdowns of a compressing plant that give the efficiency curve a bad jolt.

All parts of a compressing unit from the smallest to the largest should be interchangeable and capable of being installed with a minimum amount of trouble and lost time.

Before the unit is delivered it should be cleaned up, painted inside and out, and made as neat and attractive as possible; as neatness in machinery begets neatness in care and operation.

If a compressing unit is sent out from the shop in a rough, dirty, slipshod condition, its chances of continuing so through its natural life, until final dissolution are first-class, and its chances of starting down hill from its first day of operation are good.

This might be termed a psychological condition. A manufacturer builds a good, rugged compressing unit, puts in the proper material, both weight and quality, and has done a nice job of machining. Then he takes a whisk broom and brushes off the accumulation of dust and other material, takes a paint brush and gives it a coat of paint to change its color and possibly cover up smears incidental to construction, but still leaves it with rough and hard outlines as he sends it to the purchasers. He is satisfied that he has turned out a good job, and he has—but;

The purchaser receives it, looks it over and says, "By George! That looks like a good job, ought to stand most anything", and immediately starts in to give it "most anything". He has probably paid $5000 for it; but, because it is a good, strong, roughneck looking job, he shoves it into a cheap building, probably made of second-hand material, poorly lighted and poorly ventilated. It is almost sure to be without a floor, except mother earth.

To still further save money, he promotes some lease man, who has no idea whatever of machinery outside of his "flivver" or a roller power, to be an "oil squirt". The owner takes his lease man into his confidence something like this;

"Now, George, we have her all set up and ready to go. There are lots of times during the day that you don't have much to do, so about every so often I want you to happen in at the plant, look it over and squirt a little oil over the machine, then go back and finish your cleaning out. She is a good strong, husky bit of machinery and won't need much attention and should run night and day with little care. You live right close and, if it shuts down during the night, why you just run out and start it up again. I'll add $10 to your check".

"All right", says George, "I can use that extra ten very nicely".

Mr. owner congratulates himself that he has made himself some real money. He has saved several hundred dollars on the building, and is operating for $10 per month, plus overhead. There you have it, George, in his blissful $10 ignorance, knows nothing of the laws of combustion. Consequently, he keeps the power cylinder flooded with oil, to be sure that it has plenty of lubrication; also if a little fuel gas will operate it good, more will make it run better.

Consequence: between excessive oil and fuel gas the piston and rings become coated with carbon; the rings become stuck in grooves and the cylinder is badly scored. The power gradually decreases and in six months this once perfectly good machine will not pull its rated load.

In the meantime, George, anxious to keep the unit well lubricated, has used many times the necessary quantity of oil, the major portion of which has found its way to the floor and smeared over the machine. About once in six months George takes a Sunday off and washes the unit with gasoline, and incidentally a portion of the floor (?) into some of the main bearings.

IN FROM 5 to 10 years the purchaser has on his hands a scrap heap, with no salvage value but for scrap iron. In the meantime he has lost enough from repair expenses, and lost production, to pay for several units of the same type. Psychology is the answer, and the manufacturer is at fault for starting it in the wrong direction.

Take the other side of the case. The manufacturer takes an identical unit from the erecting floor, turns it over to the painters, who are instructed to do the best job of painting possible. The rough spots are smoothed off, a good liberal supply of filler used, and a final coat of gloss paint for finish put on. All exposed parts of metal are polished and covered with a protective coat. Finally the machine is substantially crated and properly loaded. It arrives at its location in perfect condition. Because of its neat and finished appearance it is given the greatest care in loading and unloading on and off the truck. Where it is necessary to use chains to handle any part, burlap sacks are used to prevent marring of the surface. The same care is used in placing on the foundation.

Mr. Purchaser and his general super-

*Engineer, Bessemer Gas Engine Co., Grove City, Pa.

intendent come along. After looking the machine over Mr. Purchaser turned to the superintendent, "A pretty nice job, Henry! Don't you know such a piece of machinery deserves a nice building and clean surroundings. Go ahead and erect a good substantial building with plenty of light and ventilation, *and a concrete* floor. How about a good man?"

"Well," says Henry, "I think I have just the man you want. Do you remember Pat Goldstein, the French lad we put to work a while back? Well, I have had my eye on him. He is neat about his dress and person. He cheerfully does whatever work we assign him. While he is not afraid to ask questions he attends strictly to his work, and, say, during the several months he has been with us I haven't seen him lose a minute lighting cigarets.

"I believe he is a comer, and, further, a short time ago he told me he would like to get married. I believe this is his chance. Also I believe it would be a good investment and mighty good insurance to give him a helper, some one to look after the plant nights. So much invested money should not be left to itself half the time.

"A very small, unlooked for accident could put the whole plant investment out of commission. I have another young man in mind I believe would fill the bill. I find that, while he has not had the mechanical experience Pat has, he is very reliable. He seems to be of Scotch descent, and his name is Aaron Leszezynski. These two boys would be glad to take the job at their present wages and take their chances on future improvement. What say?"

Mr. Purchaser, after listening to this unusually long speech from his superintendent, deliberates a few moments, then, "I believe you are right, Henry, go ahead".

So this new machine, an exact duplicate of the first, started out under very favorable conditions. Through the pride of the boys in charge, the whole plant, including the floor, was kept scrupulously clean. The operators asked questions and were instructed by the manufacturer's engineers as to proper fuel proportions and quantity of lubricating oil to use. Consequently, there was no oil smeared over the machine, or floor; no filth to wash off with gasoline, and, of course, the floor being concrete, it couldn't get into the main bearings and burn them out.

THE power piston and rings were free from carbon. The engine retained its full power at all times. It ran 24 hours per day for months without a stop. After 14 years of practically constant operation, and having paid for itself many times with profits, it is still salable, and will give good service for many years.

E. W. JORDAN
Engineer, Bessemer Gas Engine Co., Grove City, Pa.

The reader may say; "I guess he is drawing on his imagination". Not so! The incidents referred to are actual occurrences. In a week's trip from any point in the oil and gas producing areas we will engage to show you dozens of parallel cases.

Another very essential matter to be religiously taken care of is the item of supplies, or replacements.

There is nothing in connection with the air or gas compressing game that will create more bad temper, or hard feelings against the manufacturer than the lack of quickly available replacement parts.

MR. MANUFACTURER, consider what the purchaser is up against in case of accident. He has your machine, for which, quite likely, he has paid you $15,000, and quite likely it has cost him an additional $10,000 to get it installed and in operation.

According to the nature of the work he should get from $300 to $1000 per day income from it. He has a breakdown, a small part has failed. Suppose the value of it is $50. No duplicate is available short of the factory. Result; it requires three days to receive the replacement from the factory, by express. The purchaser is out three day's production at a loss of from $900 to $3000 for the lack of a $50 replacement.

You may ask "Why not the customer carry his own spare parts?"

Certainly, he should always carry some of the smaller items, such as extra valves and their parts, magneto repairs, piston rings, and possibly a set of connecting rod bearings. But you would hardly expect him to carry a full supply of renewals, many of which any certain customer would never need, unless he has a great number of units in constant use under severe operating conditions.

Suppose, in the case above cited, if the $50 replacement had been available so that a truck could have reached it within an hour or two, and the total time of lost service had not exceeded a half day, would the customer have appreciated the saving of a couple of thousand? Certainly he would, unless he was all ivory above his shoulders.

STILL another item worthy of serious consideration by the manufacturer is the availability of trained, expert mechanics, or engineers, capable of taking care of mechanical troubles that may develop in the field. These mechanics, or engineers, should be instantly available at a moderate charge, which the customer should be willing to pay as he receives the direct benefit. Possibly his own engineers might be able to overcome the difficulty with plenty of time, but that would mean a loss in production.

The second link in the combination is the purchaser. What is his part for the promotion of efficiency? It is very obvious that he has a very responsible part to play. Upon him, or his representatives, devolves the preliminary preparation, such as securing data relative to capacity of plant required, type, number of units to be used, location, water facilities, etc. Unless the buyer or owner of the gas to be handled is thoroughly experienced, or has an experienced engineer in his employ, he should by all means employ a competent engineer for this preliminary work, as he will save himself time and money.

The purchaser may get the idea that so simple a thing as a compression plant looks to be could be laid out by most anyone. It can be, so can a $10,000 or $20,000 residence, but we don't believe a man who could afford to build such a residence would do it that way. He would get a good architect and pay him $1000 or so and have his residence properly and scientifically designed.

Why turn over a $25,000 or $50,000 compressor plant to an oil field foreman, or some other person of no greater experience. (Understand we are not belittling the oil field foreman, for he may be solid gold in his line, but absolutely worthless as a construction engineer, lacking in the qualities that would induce him to analyze future possibilities).

What is the consequence? In nine times out of 10 the plant is located without any thought to the future and with very little regard to cost of construction. A dingy, poorly constructed building, piping laid "helter skelter", with no idea of future requirements, adding costs of construc-

Can You Afford To Gamble With $50,000 Chips?

Don't wait for a fire to sell you the wisdom of using dependable equipment.

The cost of *sure* tank protection is but a small fraction of 1% of the value of the tank full of oil.

High priced tankage is an expensive place to try out uncertain fittings. Oceco's record speaks for itself. This is *time tested* equipment ordered and reordered the world over.

THE OIL CONSERVATION
ENGINEERING COMPANY

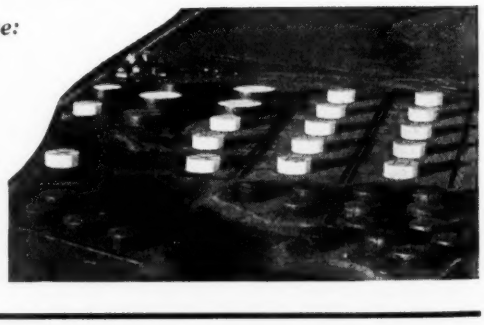
877 Addison Road — Cleveland, Ohio

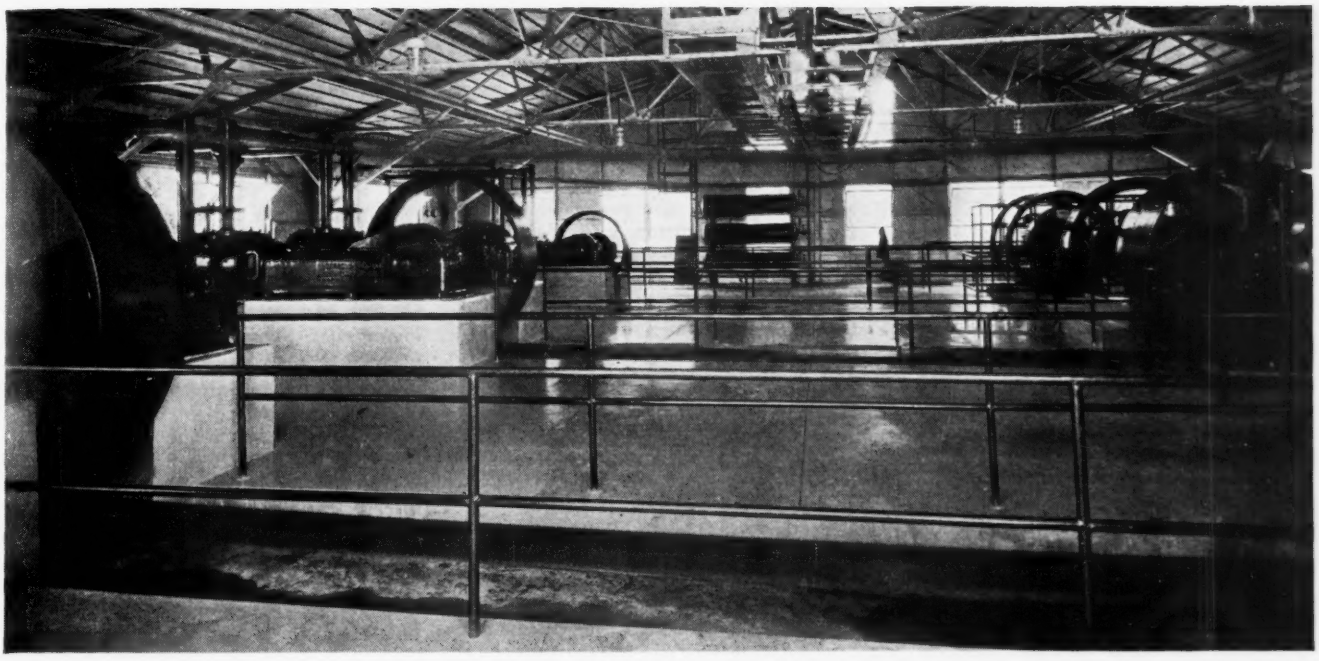
Engineering and Sales Service:

25 Broadway, New York

417½ So. Boulder St., Tulsa, Okla. — Box 552 Beaumont, Texas

Neilan, Schumacher & Co., Los Angeles, Cal.





Interior view of gasoline plant of the Gypsy Oil Co., in the Davenport field in Oklahoma, showing engines and compressors. This picture shows machinery housed in a good building according to Mr. Jordan's recommendation

tion where there is no excuse for them, and omitting essential items.

A plant so installed cannot be expected to perform at its highest efficiency. You may ask why not? Well, we will just tell you why not. You have a building that is dark and poorly ventilated, and the chances are no thought was ever given to a floor. The piping is full of unnecessary bends and fittings, setting up useless friction. Your water supply is questionable, both as to quantity and quality.

YOU probably have several men working for you that you wish to promote to the position of plant operators. They may be good, bad or indifferent. We will assume they are good.

These men are given charge, the plant is put in operation and, by reason of everything being new, and the compressing units the best that skilled mechanics can build, it runs along for six months or a year without any trouble.

Then little difficulties begin to develop. These are small matters at first, but they increase and multiply until the operators are swamped and you are at last obliged to call in the expert you should have had in the first place. He will correct your troubles for you all right, but your plant never will be again what it should be.

Your profits are not what they should be by many per cent. You decide that there is something radically wrong, and you are determined to locate it. You make a trip to the plant, perhaps the first time in six months. You poke around here and there, and what do you find?

Among other things you find the piping to the compressor cylinders reduced to about one-fourth of the capacity called for by the companion flanges on the compressor cylinders. This reduces the volume handled and increases the pressure at the discharge side, thereby reducing the efficiency very seriously at two places.

You find a surplus of tees and ells in the line. You did not find any scrubber tank to clean the incoming gas.

You find plenty of sand and other foreign matter going directly into the cylinders, fouling the valves and other working parts. You find that the gage and lines were connected to the intake header outside of the plant, preventing the gage showing actual pressure at the cylinders. You find the power end operating badly, possibly pre-igniting. All caused by water jackets being badly coated with baked-on sediment from unsuitable cooling water.

You find the units filthy and greasy from dust from the dirt floor, and wasted oil. You find your attendant clothed in stiff and greasy overalls, and his hands and face just as nasty, and if he was not expecting you, you quite likely find him in the office or out under a tree reading his daily paper, or more likely "Snappy Stories"; but withal a very discouraged and indifferent operator.

Not being of an excitable nature yourself, and being determined to sift the difficulty to the bottom, you start in something like this:

"WELL, Elmer, how is she running?"

"Fairly well, but she doesn't seem to have as much power as she used to. We don't seem to carry as much load as we did."

"H'm! Is that so? What do you think is the trouble?"

"I hardly know for sure, but I believe it is scale in the water jacket of the power cylinder. I noticed the power cylinders began running hotter than usual in spite of additional cold water. Very soon after that I noticed the engines began to pre-ignite, then they wouldn't carry their full load without getting very hot and stopping entirely. I believe the whole trouble was originally caused by bad water.

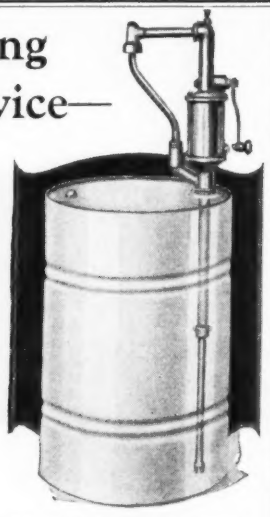
"YOU remember, possibly, me writing you about the young man who was here about six months ago, agent for a water softener? His appliance was not very expensive, seemingly, but I do believe if we had had one in when we first started to operate, we would have had very little, if any, trouble. Of course at that time we didn't know as much about this business as we do now."

"If what you say is true, it is costing me a lot of money to get this experience. I notice you have a lot of scrap valves and repair parts. Why is that?"

"Well, that is another source of trouble we didn't know about. No one ever told us we would have to blow out our suction lines, or take any precaution to prevent dirt going into the compressor cylinders. At first everything in the country seemed to come through those lines, scale, sand, small stones and even several small dead rabbits and ground squirrels. We were obliged to stop quite often to remove the accumulation, at times taking several quarts of sand and pebbles from one cylinder. This stuff would get in under the valves, they would leak, and the temperature would run

Lasting Service—

Low Cost



G & B Quart Measure Barrel Pumps answer the demand of dealers for oil dispensing units made to give long term service at a low cost.

G & B Quart Measure Barrel Pumps are sturdily constructed. They provide quick installation, easy operation and accurate measure. They afford the added attraction of inexpensive outlay and dependable performance.

Write for price and Bulletin T-12 giving complete information.

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PUMPS AND TANKS FOR THE OIL TRADE
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Here it is! at last •

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OIL COMPANIES

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The finest, most complete, up-to-date DOUBLE-ENTRY BOOKKEEPING SYSTEM

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$39.65

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Write for Sample Forms

Accounting Systems Co.
413 South Fifth Street
Minneapolis, Minnesota

up. They warped and broke. I know we are having a great deal more trouble than we should have, but what can we do. Every time we stop to clean out and replace valves we lose several hours production of that compressor."

"Well, how about this? I notice that everything in general is in a dirty, filthy condition. Is that necessary?"

"No sir, under proper conditions it is not necessary. When we first started operations we worked hard trying to keep everything clean. We used a world of waste and wiping cloths, so much that Mr. Phillips, the purchasing agent, has practically shut down on that item. What we are allowed each month will hardly last us a week."

"Well, what is the answer?"

"A good floor is one, and better ventilation another. You may not have heard of it personally, but we have had several bearings burned out, the cause directly traceable to sand. Any one of these accidents was expensive enough to lay a mighty nice piece of floor."

MORE money was wasted in poor construction work and lost through loss of production than would have paid several consulting engineers.

If you have a man in your organization who has demonstrated that he has the experience and judgment qualifying him to properly handle an engineering job of this kind, that is fine. If not in the interest of longer life of your machinery, efficient operation and better dividends, spend a little money in search of a good, reliable, efficient consulting engineer and pay him enough that he can afford to give you his full time until the plant is completed and in operation. You will find that money spent for such service will pay you larger dividends than any other like amount in the whole plant.

In order that the compressing plant shall be properly installed, the consulting engineer should be furnished, promptly and freely with all data and information at hand, by the owner or organization. This includes a log of the wells at time of drilling, original rock pressure and open flow, capacity when first brought in, average daily output, to date, present rock pressure and open flow, present daily output, length, size and general layout of pipe lines, condition of casing in the wells and whether water is present in the sand.

He should know the price paid for purchased gas, and the price received for all gas sold. After all this information is furnished him, he should give a number of days' personal study of the local conditions before taking any steps toward laying out a compressing plant.

The engineer should be competent to measure up the gas and decide its future possibilities and to figure out the pipe lines based on past and present operations, to take care of future requirements as the gas supply falls off.

He must figure the proper size units and number required to handle the gas available with highest efficiency. He must lay out requisite buildings, seeing to it that they have a maximum of daylight and ventilation. Ventilation must be arranged so that no gas can accumulate near the floor. Have roof ventilators that cannot be closed.

Place your buildings where you are sure of good solid formation for engine foundations, but not an outcropping of sandstone, as that would mean leaving your main piping unburied, or expensive burying. Lay out your buildings as substantial as possible with good concrete foundations and concrete floors.

Concrete is preferable to brick for floors as it is so much easier kept clean. Make your floors as smooth as possible and have them painted, also the surface of foundations. Use plenty of paint, it is always a good investment. In designing your buildings make them simple and substantial. Don't put in a dollar that will not bring dollars back. Plenty of light, ventilation and paint is always a paying investment.

Lay out your piping so it is as simple as possible, without an unnecessary bend or fitting in it. (Bends and fittings, by increasing friction, always cost more than the invoice calls for.) At the same time keep in view the possibility of future expansion. Be sure that your machinery is protected against dirt, both inside and out.

Be sure that the water supply is adequate, and of good quality. Have it analyzed, and if it contains any substance that is liable to scale or corrode surfaces with which it comes in contact, insist upon a softener, or purifier, being installed.

FOR constant service specify all auxiliary machinery in duplicate, also an extra compressing unit as emergency service—both are good investments.

Every plant, large or small, should have at least one first-class mechanic in charge of all operations. A competent man should be able to anticipate a great many of the small ills to which a gas engine driven outfit is heir, and have the remedy ready at hand the moment it is required. He should at all times see to it that there is a reasonable supply of replacement parts on hand and in condition for immediate use.

A set of proper report sheets should be drawn up (copies for each watch), giving every item of interest in connection with the operation of the plant. Records should be taken at

least every half hour, and unless recording charts are used, the record sheets should show, the revolutions per minute of each individual unit *accurately taken*, both intake and discharge pressures at each unit. (Gages should be tested frequently and kept correct.)

All oil, grease and waste, or wiping cloths, should be noted. All replacements and repairs, including time lost, should be charged to the unit on which used. A recording meter, or meters, should be placed on the intake lines near the plant, and charts replaced promptly.

A record of the volumetric displacement of all low pressure cylinders for each day should be kept, and checked against the meter charts, remembering that the volumetric efficiency of the compressor is based on free gas, or free air at the local barometer reading.

Temperatures should be taken of the overflow of the cooling water from the power cylinder, thermometers so placed that they show the temperature of the water in the jacket at the overflow outlet.

The volume of the fuel gas for each unit should be recorded daily and checked against the amount of delivery from compressors.

Specific gravity of fuel gas and gas delivered should be taken daily, (an item for future reference).

OTHER items will present themselves from time to time, of which it is always of interest to have a record. Some of the items mentioned may seem superfluous and not necessary, but such is not the case. They are all necessary to a full knowledge of what the overhead is and where the leaks are, if any.

It should be the duty of the head engineer, or mechanic, to see that his assistants keep these records accurately and promptly, and not do any guessing on them.

Indicating of gas engines is not very essential after they have been once properly adjusted, unless they show a falling off of power and production, or excessive gas consumption. This is also true of the compressors.

Lubrication should be watched very closely. Use enough for proper oiling of the moving parts, but not a drop more. Every drop in excess of the actual requirements, is wasted, and oil smeared over the outside of bearing or engine frame gets you no where except towards a shrinkage of dividends. This applies to all supplies and fuel gas as well.

We have tried to demonstrate how all of the several persons who come in contact with the machinery, from the manufacturer to the finished plant in operation, can co-operate to obtain the highest possible efficiency for the money expended. A great many of the larger corporations are following along these lines and going even further.

E. W. Jordan.

FORMULA
for a
Business Getting 100% Pennsylvania Motor Oil

First—A quantity of 450 Bright Stock (Sharples Process) refined at the *Coraopolis* plant of The Freedom Oil Works Co.

Second—A quantity of 100% Pennsylvania Crude Neutrals refined at the *Freedom* Plant of The Freedom Oil Works Co.

Third—Blend to tested specifications by experienced specialists of this 48 year old organization, producing a line of Freedom Motor Oils which places your business above competition, pleases your dealers, and helps them to hold their customers.

This is the formula used for years by many of the country's leading jobbers. Their growing businesses recommend that you try it. Write for quotations. Immediate shipment can be made in tank cars, compartment tank cars, barrels, or drums.

Guaranteed 100% PURE PENNSYLVANIA OIL

Permit No. 31

Also available for immediate shipment

450 Bright Stock (Sharples Process) which requires less neutral to blend to the ordinary required specifications.

100% Pennsylvania Motor Oils, *blended to your own Specifications*, from Freedom 450 Bright Stock and Freedom 100% Pennsylvania Crude Neutrals.

Freedom Quality Stocks
- 600 Steam Refined
- 635 Steam Refined
- 650 Steam Refined

Freedom 300 Mineral Seal Oil made to Railroad Specifications.

Freedom Filtered Burning Oils.

The Freedom Oil Works Company
Freedom, Penna.
Established 1879
Refineries at Freedom and Coraopolis, Pennsylvania

FREEDOM

How to Figure Cracking Costs

[*From Paul Truesdell's "Visiting Around the Refineries" in the National Petroleum News, February 8, 1928*]

"A refiner I talked with the other day expressed the opinion that any refiner who tries to figure by itself cost of operating his cracking plant, is fooling himself. The proper way to do it, this man thinks, is to figure it in connection with the skimming part of his plant.

"He says:

'If you charge to your skimming equipment the crude at the market price and credit to it at the market the gasoline and other products it produces, you will find the cost of your gasoline has been pretty high. Then take your cracking equipment, charge to it the stock put through it and credit it with the gasoline produced and you will find your cracked gasoline costs you less than the straight run, generally considerably less.

'Therefore, a high yield is the most important thing to get out of your cracking process because by just so much as the quantity of cracked gasoline predominates in the total gasoline output of your plant, by just that much the average cost of making your gasoline is cut down.'

"This man favors the use of a cracking process that will operate on fuel oil, first because the charging stock is cheaper, and second, because the quantity of crude is greater than the quantity of gas oil, the quantity of cracked gasoline from fuel oil is more than the quantity made from gas oil and therefore the total cost of all the gasoline made at the plant is cut down."

Universal Oil Products Co
Chicago, Illinois

Dubbs Cracking Process
Owner and Licensor

Seminole District's Total Yield 157 Million Barrels

TULSA, March 8

SINCE date of discovery in 1926 to Feb. 1, 1928, the five pools of the Seminole district have yielded 157,603,509 barrels of oil.

This amount, almost incomprehensible to those who think in terms of the usual pool development, started coming out early in 1926, but not until the middle of that year did anyone sense the fact that a record-breaking field was in the making.

Tables which follow in this article set forth the gross recovery, by leases, in the five pools and a chart shows the beginning of production in each pool, together with its performance since. The past year, of course, yielded the most of the oil. About a year ago, NATIONAL PETROLEUM NEWS published a similar tabulation on the field in the Feb. 9, 1927, issue, page 17. At that time the Seminole, or 9-6, pool was nearing its peak and Searight was getting well along. Earlsboro was in its infancy; Bowlegs had just been discovered and Little River was unknown.

The district, up to Feb. 1, a year ago, had made 17,533,995 barrels. It has, therefore, yielded a little more than 140,000,000 barrels in one year's time, Feb. 1 to Feb. 1. Of the 17 million odd barrels produced to Feb. 1, 1927, the Seminole pool proper contributed 16,785,655 barrels. That pool, Feb. 1, 1927, produced 224,879 barrels from 192 wells and was only 20 days from reaching its peak.

In the accompanying tables an attempt has been made to give an idea of the acreage recovery. Any figure on acreage recovery is more or less arbitrary, for averages only can be dealt in.

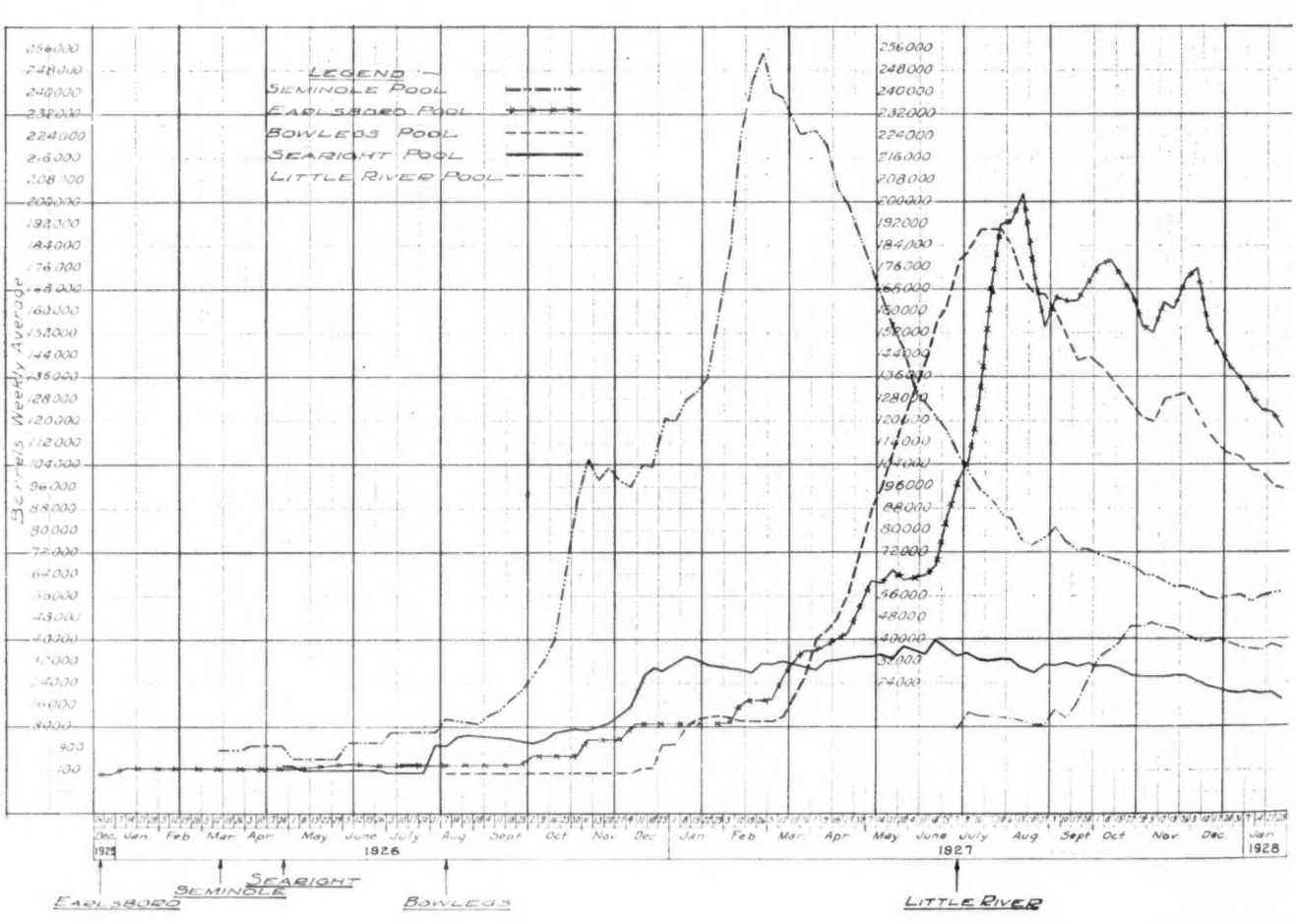
What is attempted in this report is to give some indication of what the average has been, and some account had to be taken of wells that once produced and later were abandoned, as well as dry holes. Naturally, there is no acreage recovery for a dry hole. The inclusion of the failures and the onetime producers, lumped together, is done more to set up some kind of yardstick in measuring the profits or lack thereof on each lease.

Executives who have to watch the financial side of the development assert that, at the prices which prevailed over most of 1927, a gross recovery of 10,000 barrels per acre was necessary to return development costs of all kinds. Hence, to make even a perfunctory calculation on the profit and loss side of the transaction, the dry holes and one-time producers had to be included.

What has been done, therefore, was to set forth the "acres developed," the number of which in any case, divided by 10, gives the number of wells drilled on the lease. The difference between that result and the number of

(*Continued on Page* 132)

Weekly Average Production Curve of Five Pools in Seminole District to Feb. 1



Gross Production Recovery Per Acre Seminole District To Feb. 1

Summary of Production of Seminole Area to Feb. 1

FIELD	Wells Producing Feb. 1	Acres Developed	Production Feb. 1	Field Total Production	Recovery Per Acre
Earlsboro	288	3,235	115,400	41,917,252	12,957
Bowlegs	304	3,380	96,867	39,885,824	11,801
Searight	71	880	18,678	13,328,166	15,146
Seminole	320	3,600	57,134	56,241,182	16,399
Little River	91	1,010	36,032	6,231,085	3,199
Total Five Pools	1,074	12,105	324,213	157,603,509	13,011

Seminole Pool

Company Lease - Location	Wells Producing Feb. 1	Acres Developed	Production Feb. 1	Gross Production	Recovery Per Acre
Amerada Pet. Corp.					
Fixico 23-9-6	4	40	1,100	1,539,885	38,497
James 24-9-6	0	10	0	700	70
Killingsworth 23-9-6	4	40	591	666,557	16,664
Rentie 23-9-6	3	40	728	766,545	19,164
Total Amerada	11	130	2,419	2,973,687	22,875
Atlantic Oil Prod. Co.					
J. Cudjo 35-9-6	0	20	0	25,987	1,299
N. Cudjo 35-9-6	3	40	590	590,056	14,751
Total Atlantic	3	60	590	616,043	10,267
Barnsdall Oil Co.					
Carter 24-9-6	9	80	2,944	2,567,504	32,094
Henry 14-9-6	2	20	586	126,406	6,320
Jones 34-9-6	4	40	970	1,077,347	26,934
Total Barnsdall	15	140	4,500	3,771,257	26,938
Carter Oil Co.					
B. Carter 24-9-6	2	20	170	180,316	9,016
F. Carter 23-9-6	3	40	115	460,209	11,505
J. Carter 24-9-6	3	40	17	180,182	4,505
Creamer 34-9-6	2	30	30	7,135	236
R. Cudjo 35-9-6	4	40	295	765,015	19,125
W. Cudjo 34-9-6	2	20	22	113,703	5,685
Gilliland 27-9-6	2	20	360	190,813	9,540
M. Grisso 15-9-6	1	10	305	34,964	3,496
Grisso 23-9-6	5	80	900	1,212,457	15,156
Jackson 27-9-6	1	10	10	3,284	328
G. F. Killingsworth 14-9-6	4	60	585	735,471	12,258
M. E. Killingsworth 23-9-6	12	120	8,100	3,895,365	32,461
Knapp 13-9-6	3	40	52	429,269	10,732
Lukes 27-9-6	7	80	1,655	1,121,724	14,022
Pounder 34-9-6	2	20	37	15,870	794
Simpson 35-9-6	3	30	67	67,389	2,246
Strothers 34-9-6	4	40	470	1,107,024	27,676
Vierson 23-9-6	3	40	300	258,637	6,466
Total Carter	63	740	13,490	10,778,827	14,539
Empire Gas & Fuel					
Gross 25-9-6	3	50	87	223,288	4,465
Wilson 34-9-6	2	40	384	461,021	11,550
Total Empire	5	90	471	684,309	7,603
Gypsy Oil Co.					
Butler 35-9-6	4	40	752	387,034	9,676
Carter 24-9-6	8	80	582	982,542	12,282
T. Cudjo 34-9-6	5	60	520	182,598	3,043
Fixico 26-9-6	7	80	133	210,379	2,630
Harjo 25-9-6	3	30	1,075	455,201	15,173
Wolfe 26-9-6	6	70	195	1,334,949	19,071
Total Gypsy	33	360	3,257	3,552,703	9,869
Independent O. & G.					
P. Fixico 23-9-6	3	40	315	166,111	4,153
Harjo 25-9-6	3	40	157	122,342	3,059
*Butler 35-9-6	3	40	1,285	792,104	19,803
†T. Fixico 26-9-6	8	80	650	2,021,404	25,268
††Jones 26-9-6	4	40	295	687,803	17,195
Total Independent	21	240	2,702	3,789,764	15,791
I. T. I. O. Co.					
Allen 25-9-6	2	20	494	55,883	2,795
Bowlegs 26-9-6	12	120	2,727	2,281,324	19,011
Fleet 25-9-6	1	10	0	4,955	496
Goodin 23-9-6	3	40	334	205,007	5,125
Harjo 23-9-6	4	40	143	379,490	9,487
James 24-9-6	4	50	220	779,776	15,596
Marcey 13-9-6	0	10	0	455	46
Reed 24-9-6	3	30	28	53,747	1,792
Total I. T. I. O.	29	320	3,946	3,760,637	11,752
Kingwood Oil Co.					
Harjo 22-9-6	3	50	1,315	725,578	14,512
Magnolia Pet. Co.					
Boren 2-8-6	1	10	51	13,752	1,375
Franks 25-9-6	4	40	816	619,375	15,484
Total Magnolia	5	50	867	633,127	12,663
Mid-Continent Pet. Corp.					
Rentie 14-9-6	9	110	1,370	1,242,700	11,297
Tayoche 24-9-6	7	40	300	965,413	24,135
Total Mid-Continent	16	150	1,670	2,208,113	14,721
Mid-Kansas O. & G.					
Wilkins 25-9-6	2	20	104	208,861	10,443
Jacksey 3-8-6	0	20	0	3,133	107
Pressley 3-8-6	0	10	0	7,555	755
Total Mid-Kansas	2	50	104	219,549	4,391
Phillips Pet. Co.					
Strothers 27-9-6	2	40	30	104,100	2,603
Prairie O. & G.					
Gross 25-9-6	5	50	125	76,216	1,504
Mason 36-9-6	1	10	95	151,120	15,112
Spencer 13-9-6	1	10	13	7,427	743
Strothers 27-9-6	8	80	1,210	1,787,109	22,339
Total Prairie	15	150	1,443	2,021,872	13,479
Pure Oil Co.					
Stroth. "A" 26-9-6	17	160	4,021	4,293,644	26,835
Stroth. "B" 36-9-6	5	50	1,896	787,335	15,747
Stroth. "C" 34-9-6	1	10	184	17,712	1,771
Total Pure	23	220	6,101	5,098,691	23,176
Roxana Pet.					
Harber 22-9-6	2	20	262	184,193	9,210
Lasley 22-9-6	2	20	22	49,155	2,458
Total Roxana	4	40	284	233,348	5,884
Sinclair O. & Gas.					
Carter 13-9-6	2	20	28	16,842	842
Cudjo "A" 35-9-6	6	40	1,035	3,025,308	37,816
Cudjo "B" 35-9-6	4	40	975		
Dicey 22-9-6	2	20	910	270,294	13,518
Fixico 23-9-6	4	40	585	679,072	16,977
Total Sinclair	18	160	3,533	3,991,516	24,947
Slick, T. B., Inc.					
Cudjo 35-9-6	3	30	740	461,459	15,382
Born 35-9-6	0	20	0	271	14
Franks 35-9-6	7	80	973	2,209,365	27,617
Giblet 33-9-6	3	30	2,160	737,200	14,573
Tiger 1-8-6	1	10	30	9,029	903
Total Slick	14	170	3,903	3,417,324	20,102
Superior Oil Corp.					
Cudjo 35-9-6	4	40	745	1,351,811	33,795
Noble 15-9-6	1	10	3	7,849	785
Total Superior	5	50	748	1,359,660	27,193
Texas Company					
Mayhue 14-9-6	1	20	300	82,843	4,142
Strothers 2-8-6	1	10	130	14,549	1,455
Total Texas	2	30	430	97,392	3,246
Tidal Companies					
Carter 24-9-6	4	40	855	736,086	18,402
Fixico 26-9-6	6	70	720	1,619,981	23,143
D. Harjo 25-9-6	3	30	745	236,249	7,875
T. Harjo 23-9-6	7	80	252	139,945	1,749
Mahardy 24-9-6	2	40	195	1,051,355	26,284
Tayeche 25-9-6	0	20	0	622,044	31,102
Total Tidal	22	280	2,767	4,405,660	15,735
Turman Oil Co.					
Cudjo 35-9-6	4	35	1,392	725,892	20,734
Grisso 35-9-6	1	5	231	243,148	48,629
Jones 34-9-6	4	40	941	828,985	20,725
Total Turman	9	80	2,564	1,798,025	22,475
Total Seminole	320	3,600	57,134	56,241,182	15,623

* Independent & McCulloch.
† Independent & Garland.
†† Independent & Interocean.

wells listed as producing on Feb. 1 indicates the number that were dry and one-time producers. An exception to this is found occasionally where twin wells were drilled on a lease, as in Earlsboro, where the Earlsboro sand was exploited wherever profitable. In such cases the number of wells producing Feb. 1. multiplied by 10, will give a result that exceeds the "acres developed" figure.

Neither is any account taken of the many dry holes drilled throughout the district on leases that produced no oil at all. Around all the five fields and in all directions from them there was much unprofitable wildcatting, as is the case in all major plays. The present tabulation covers only leases, large and small, which produced some oil.

As stated, no defense is offered of the "acreage recovery" figure. The producer who drills 8 wells on 80 acres and gets production from 4 on half of the lease while the other 4 are dry will, of course, contend that acreage recovery should be computed on the basis of the 40-acre productive tract and not on the whole 80. That is correct, but it is a refinement of the calculations not attempted here. Our purpose in setting forth that column is to indicate the average production per "developed" acre, not productive acre. The data should be read in that light solely.

On that basis the five pools averaged recovery of 13,011 barrels per acre and, as a whole, more than returned development costs, not taking into account the unprofitable ventures outside the pools.

From a recovery standpoint, both in gross production and acreage yield, the original Seminole field is the star performer, with total yield of 56,241,182 barrels, or 16,399 barrels per acre. Little River is at the foot of the class and is now considered destined so to remain, although it is the youngest of the group.

The district reached its peak production July 30, 1927, with 527,401 barrels from 638 wells. That was an average of 827 barrels per well. As

(*Continued on Page* 136)

Earlsboro Pool

Company Lease - Location	Wells Producing Feb. 1	Acres Developed	Production Feb. 1	Gross Production to Feb. 1	Recovery Per Acre
Amerada Pet. Corp.					
Anderson 15-9-5	3	70	1,545	1,888,901	26,984
*Cowden 4-9-5	8	80	2,255	1,545,278	19,316
Rogers 3-9-5	2	20	1,935	487,571	24,379
Total Amerada	13	170	5,735	3,921,750	23,069
Barnsdall Oil Co.					
Brown 10-9-5	4	40	2,536	562,422	14,061
F. Bruner 2-9-5	2	20	957	83,510	4,176
N. Bruner 10-9-5	4	40	1,463	385,690	9,642
Cudjo 14-9-5	1	10	26	23,436	2,347
D. Davis 11-9-5	4	40	1,548	484,978	12,124
J. Davis 11-9-5	4	40	1,228	285,727	7,143
M. Davis 11-9-5	3	30	214	363,538	12,117
Gibson 9-9-5	8	80	2,299	1,327,578	16,595
Hearn 15-9-5	1	10	6	3,795	380
Ingram 1-9-5	7	70	5,258	798,545	11,408
Pack 10-9-5	5	40	211	265,904	6,648
Peter 10-9-5	4	40	330	171,600	4,290
Sango 1-9-5	3	30	6,127	248,923	6,297
Sebolka 15-9-5	1	10	746	726,154	72,615
H. Sullivan 11-9-5	2	20	0	149,440	7,472
Sullivan Harjo 10-9-5	2	30	64	28,183	939
Wasutke 12-9-5	4	40	1,901	417,624	10,441
D. Smith 15-9-5	0	10	0	101,763	10,176
Hooley 4-9-5	0	15	0	6,413	428
Total Barnsdall	59	615	24,914	6,435,223	10,464
Carter Oil Co.					
S. Davis 13-9-5	1	10	270	125,173	12,517
Payne 12-9-5	3	30	130	391,703	13,057
Sango 1-9-5	4	40	3,940	695,824	17,396
Total Carter	8	80	4,340	1,212,700	15,159
Continental Oil Co.					
Kays 2-9-5	2	20	60	101,696	5,082
Spencer 12-9-5	4	40	1,375	1,070,206	26,755
Total Continental	6	60	1,435	1,171,902	19,531
Crosbie, J. E.					
Bryant 9-9-5	2	20	0	925,620	46,281
Empire Gas & Fuel					
Barker 12-9-5	1	20	2,150	233,161	11,658
Edmundson 3-9-5	3	60	1,162	816,526	13,609
Total Empire	4	80	3,312	1,049,687	13,121
Gypsy Oil Co.					
McFarland 9-9-5	0	30	0	119,736	3,991
Strain 17-9-5	0	20	0	480	24
Smith 15-9-5	0	20	0	1,071	53
Bora 16-9-5	1	20	5	34,745	1,737
Bruner 10-9-5	4	40	2,342	713,312	17,835
B. Carter 11-9-5	11	100	4,412	889,069	8,891
Earl 16-9-5	1	40	5	54,481	1,362
Hunick 5-9-5	1	10	2,302	128,866	12,887
Noble 12-9-5	4	40	4,612	1,219,052	30,476
Peter 10-9-5	3	70	185	388,616	5,552
Sango 1-9-5	4	40	5,620	579,019	14,475
State 16-9-5	4	40	1,362	2,359,947	58,999
Total Gypsy	33	470	20,845	6,488,394	13,805
Independent O. & G.					
Bruner 10-9-5	4	40	50	368,654	9,216
Sullivan 10-9-5	3	40	20	205,253	5,131
†Knappenberger 8-9-5	5	60	2,795	743,457	12,391
††Gaines 11-9-5	2	30	1,495	935,999	31,200
††Odell 4-9-5	4	30	140	857,536	28,585
Total Indepedndent	18	200	4,500	3,140,899	15,705
Interocean Oil Co.					
Payne 12-9-5	1	10	20	41,327	4,133
Magnolia Pet. Co.					
Bryant 12-9-5	6	60	2,715	826,396	13,773
Cowden 4-9-5	4	60	72	29,873	498
Dixon 12-9-5	1	30	21	5,160	172
Edmundson 3-9-5	4	40	55	187,999	4,700
Holmsley 11-9-5	8	70	3,578	1,876,565	26,808
Ingram 10-9-5	1	10	30	59,891	5,989
Lena 10-9-5	3	30	81	154,982	6,166
Seay 12-9-5	9	80	5,068	531,637	6,645
Simpson 10-9-5	3	40	312	297,876	7,447
Sparks 11-9-5	7	70	2,208	1,319,607	18,852
Sullivan 12-9-5	3	40	137	155,283	2,632
Total Magnolia	49	530	14,277	5,445,269	10,274
Mid-Continent Pet.					
McKinley 9-9-5	7	70	450	970,350	13,862
Mid-Kansas O. & G.					
Anderson 14-9-5	3	40	310	95,698	2,392
Phillips Petroleum					
Dunaway 14-9-5	1	10	22	5,787	579
Gram 9-9-5	5	60	135	404,486	6,741
Total Phillips	6	70	157	410,273	5,861
Philmack & Marland					
Dobbs	0	20	0	113,335	5,667
Prairie O. & G.					
Davis 13-9-5	4	40	895	548,015	13,700
C. Graham 3-9-5	2	30	30	385,670	12,856
O. Graham 10-9-5	4	40	2,135	779,867	19,487
Stidham 11-9-5	13	120	4,115	1,947,250	16,227
Total Prairie	23	230	7,225	3,660,787	15,916
Roxana Pet.					
Bayliss 17-9-5	1	10	14	2,207	221
Anderson 13-9-5	0	10	0	124	12
Hearn 13-9-5	0	10	0	24,464	2,446
Spencer 12-9-5	2	20	1,345	581,408	29,070
Strain 17-9-5	0	10	0	360	36
Total Roxana	3	60	1,359	608,563	10,143
Shaffer O. & R.					
Clark 1-9-5	5	60	1,175	104,331	1,739
Sinclair O. & G.					
Foreman 18-9-5	1	10	15	2,385	239
Hollins 12-9-5	3	30	478	250,898	8,363
Sango 2-9-5	2	20	5,040	330,884	16,544
Total Sinclair	6	60	5,533	584,167	9,736
Skelly Oil Co.					
Spencer 12-9-5	2	20	718	836,611	41,833
Texas Company					
Anderson 2-9-5	6	60	1,490	108,614	1,810
Brown 10-9-5	8	80	2,825	307,376	3,842
Rogers 5-9-5	4	40	4,950	1,429,725	35,743
Wilmont 10-9-5	7	40	3,280	334,526	8,363
Total Texas	25	220	12,545	2,180,241	9,910
Tidal Companies					
Watkins 9-9-5	8	80	3,110	824,415	10,305
Twin State Oil Co.					
Barker 12-9-5	4	40	110	423,247	10,581
Hearn 2-9-5	3	30	3,380	1,272,463	42,415
Total Twin State	7	70	3,490	1,695,710	24,224
Total Earlsboro	288	3,235	115,400	41,917,252	12,957

* Amerada and J. A. Hull Oil Co.
† Independent and Darby Petroleum.
†† Independent and Margay Oil Co.

Bowlegs Pool

Company Lease - Location	Wells Producing Feb. 1	Acres Developed	Production Feb. 1	Gross Production to Feb. 1	Recovery Per Acre
Amerada Pet.					
Rascoe 15-8-6	8	80	3050	2,230,008	27,875
Atlantic Oil Prod.					
Baker 10-8-6	4	40	555	490,846	12,271
Fleet 23-8-6	4	40	649	407,660	10,191
Grayson 13-8-6	3	30	1,359	472,956	15,765
Jones 16-8-6	3	70	101	85,760	1,225
C. Jones 9-8-6	2	20	408	179,980	8,999
Total Atlantic	16	200	3,072	1,637,202	8,136
Barnsdall Oil					
McNac 28-8-6	1	10	33	13,325	1,333
Murrow 11-8-6	4	40	1,005	322,223	8,056
Total Barnsdall	5	50	1,038	335,548	6,711
Carter Oil Co.					
Bowlegs 15-8-6	3	30	1,285	802,189	26,740
Burden 23-8-6	3	30	340	65,141	2,171
Harjoche 14-8-6	6	80	865	634,322	7,929
Hilly 23-8-6	3	30	1,155	316,372	10,546
Jones 11-8-6	4	40	2,115	392,846	21,713
McGeisey 21-8-6	1	20	45	7,717	386
Melisse 9-8-6	1	10	540	116,103	11,610
Walker 15-8-6	4	40	755	555,660	13,892
Wise 23-8-6	12	120	4,715	2,549,486	27,079
Total Carter	37	400	11,815	5,439,836	13,600
Empire G. & F.					
Lacey 14-8-6	6	80	757	848,667	10,608
Wise 23-8-6	2	30	715	284,513	9,484
Total Empire	8	110	1,472	1,133,180	11,211
Gypsy Oil Co.					
Bowlegs 22-8-6	1	20	0	66,778	3,339
Bradley 9-8-6	1	10	20	9,220	922
Cumsey 10-8-6	4	40	1,582	228,322	5,708
Grayson 13-8-6	4	40	1,037	333,248	8,332
Harjoche 10-8-6	1	10	977	49,627	4,963
Henderson 13-8-6	1	10	0	3,598	360
Walker 15-8-6	8	80	2,275	620,182	7,752
Wise 23-8-6	3	30	315	29,490	983
Jones 11-8-6	1	10	440	47,521	4,752
Total Gypsy	24	250	6,646	1,387,986	5,552
I. T. I. O. Co.					
Barnett 24-8-6	2	30	387	215,109	7,170
Barnett-B 23-8-6	1	10	329	8,263	826
Billington 22-8-6	5	50	689	301,658	6,033
Bowlegs 22-8-6	11	110	1,481	610,354	5,549
Burden 23-8-6	1	10	3	877	88
Davis 13-8-6	4	40	1,399	1,274,814	31,870
Fay 13-8-6	9	90	2,798	741,167	8,235
Goforth 15-8-6	11	120	1,706	1,545,799	12,882
Livingston 15-8-6	11	120	3,966	3,351,417	27,928
Hull 26-8-6	1	10	0	13,893	1,389
Lizzie 11-8-6	2	20	796	131,597	6,579
Walker 15-8-6	8	80	1,173	1,329,027	16,613
Wilmont 15-8-6	4	40	913	676,088	16,902
Work 24-8-6	2	20	108	103,940	5,197
Youngblood 24-8-6	2	40	258	429,305	10,733
Total I. T. I. O.	74	790	16,006	10,733,308	13,586
Independent O. & G.					
Coker 21-8-6	0	20	0	89,286	4,464
Magnolia Pet.					
Davis 13-8-6	2	20	876	67,388	3,369
M. Davis 13-8-6	1	10	444	37,100	3,710
Hammond 10-8-6	2	20	104	9,573	479
Rhodes 12-8-6	2	20	5,218	190,101	9,505
Van Buskirk 9-8-6	1	10	266	11,343	1,134
Total Magnolia	8	80	6,908	315,505	3,944
McCulloch					
Bowlegs 22-8-6	2	30	380	115,166	3,838
Mid-Continent Pet. Corp.					
Baker 10-8-6	4	40	1,702	937,128	23,428
Bowlegs 22-8-6	1	10	0	113,221	11,322
Hutka 24-8-6	1	20	1	34,941	1,747
Smith 12-8-6	6	60	850	67,367	1,123
Total Mid-Continent	12	130	2,553	1,152,657	8,867
Minnehoma Oil Co.					
Bowlegs 15-8-6	4	40	108	397,420	9,936
Prairie O. & G.					
Gahagan 23-8-6	4	40	640	467,087	11,677
Harber 10-8-6	8	80	4,350	1,330,200	16,628
Jones 11-8-6	4	70	865	229,096	3,273
Templeton 12-8-6	4	40	2,915	649,821	17,371
Whitney 23-8-6	4	40	580	159,699	3,992
Total Prairie	24	270	9,350	2,880,903	10,670
Pure Oil Co.					
Reed 14-8-6	15	190	3,684	3,123,397	16,439
Strothers-D 11 & 14-8-6	4	40	765	168,733	4,218
Strothers-E 10-8-6	3	30	1,023	138,743	4,624
Total Pure	22	260	5,472	3,430,873	13,196
Roxana Pet. Corp.					
Taylor 16-8-6	6	70	1,475	608,610	8,694
Shaffer O. & R.					
Lacey 14-8-6	3	30	640	311,749	10,391
Sinclair O. & G.					
Bowlegs 22-8-6	1	10	45	52,848	5,285
Adams 22-8-6	0	10	0	7,827	783
Cumsey 10-8-6	4	40	7,489	635,630	15,891
Ellen 11-8-6	6	70	1,769	623,705	8,910
Harjo 14-8-6	3	40	835	906,881	22,672
Jones 9-8-6	6	60	5,222	1,420,666	23,678
Taylor 10-8-6	4	40	3,437	872,013	21,800
Walker 22-8-6	4	40	750	683,442	17,086
Total Sinclair	28	310	19,547	5,203,012	16,784
Texas Company					
Reed 14-8-6	10	130	3,275	1,533,885	11,799
Tidal Companies					
Grayson 13-8-6	4	40	1,300	199,143	4,978
Harjoche 10-8-6	6	60	2,480	595,031	9,917
Total Tidal	10	100	3,780	794,174	7,942
Twin State Oil Co.					
Jones 11-8-6	3	30	280	155,516	5,184
Total Bowlegs	304	3,380	96,867	39,885,824	11,801

Searight Pool

Company Lease - Location	Wells Producing Feb. 1	Acres Developed	Production Feb. 1	Gross Production	Recovery Per Acre
Amerada Pet. Corp.					
Johnson 4-9-6	1	20	70	11,674	584
Strothers 3-9-6	2	20	1,400	191,525	9,576
Total Amerada	3	40	1,470	203,199	5,080
Carter Oil Co.					
Davis 4-9-6	7	70	985	1,906,678	27,238
Frazier 3-9-6	6	60	2,960	1,949,204	32,487
Johnson 3-9-6	1	10	5	6,419	642
Kiker 2-9-6	1	10	30	9,917	992
Mandler 3-9-6	2	20	30	7,861	392
Scott 26-10-6	1	10	30	15,347	1,535
Stewart 34-10-6	0	50	0	629,285	12,586
Total Carter	18	230	4,040	4,524,711	15,325
Gypsy Oil Co.					
Cudjo 4-9-6	4	40	567	329,878	8,244
Mid-Continent Pet.					
Grayson 34-10-6	6	60	85	1,817,473	30,291
Saloche 33-10-6	4	40	1,510	321,727	8,043
Total Mid-Continent	10	100	1,595	2,139,200	21,392
Pine, W. B.					
Lula 4-9-6	1	10	30	935	94
Prairie O. & G.					
Cannon 33-10-6	1	10	15	3,695	370
Carter 10-9-6	1	20	20	10,188	509
Houck 33-10-6	1	20	5	2,832	142
Kincaid 33-10-6	5	100	70	2,101,344	21,013
Weimer 22-10-6	1	10	25	4,554	455
Total Prairie	9	160	135	2,122,613	13,266
Pure Oil Co.					
Aldridge 3-9-6	6	60	2,832	1,102,172	18,370
Roxana Pet.					
Strothers 3-9-6	4	40	2,464	504,276	12,607
Sinclair O. & G.					
Polly 3-9-6	4	40	1,955	676,471	16,912
Searight O. & G.					
Youngblood	0	40	0	541,059	13,526
Superior O. & G.					
Varnum 4-9-6	1	10	62	3,950	395
Texas Company					
Fleet 4-9-6	1	10	50	2,592	259
Twin State Oil Co.					
Jeming 4-9-6	2	20	500	274,693	13,735
Wilcox O. & G.					
Chupco 4-9-6	8	80	2,978	902,417	11,280
Total Searight	71	880	18,678	13,328,166	15,146

Little River Pool

Company Lease - Location	Wells Producing Feb. 1	Acres Developed	Production Feb. 1	Gross Production to Feb. 1	Recovery Per Acre
Amerada Pet.					
Nitey 2-7-6	4	40	2,630	274,450	6,861
Fore 35-8-6	2	30	1,140	148,008	4,934
Total Amerada	6	70	3,770	422,458	6,035
Barnsdall Oil					
Hotulka 22-7-6	1	10	0	1,022	102
Blackwell O. & G.					
Nitey 35-8-6	7	80	3,806	875,574	10,945
Carter Oil Co.					
Fish 36-8-6	5	50	1,475	137,668	2,753
Jackson 11-7-6	1	10	100	10,370	1,370
Total Carter	6	60	1,575	148,038	2,461
Continental Oil					
Cosar 36-8-6	2	20	725	105,345	5,268
Gypsy Oil Co.					
Campbell 36-8-6	2	20	265	104,188	5,267
Monger 1-7-6	1	10	52	6,287	629
Pattey 35-8-6	3	30	642	145,706	4,857
Wadsworth 1-7-6	1	10	0	2,761	276
Total Gypsy	7	70	959	258,935	3,699
Independent O. & G. & White Eagle					
Davis 2-7-6	2	20	2,095	146,030	7,302
I. T. I. O. Co.					
Campbell 1-7-6	1	10	164	15,520	1,552
Dungan 35-8-6	3	40	3,028	461,540	11,539
M. A. House 1-7-6	1	10	386	194,189	19,419
W. E. House 1-7-6	1	10	37	763,824	76,382
House-B 2-7-6	3	30	1,812	254,944	8,698
Jackson 1-7-6	3	30	2,170	442,188	14,773
McCulla 1-7-6	3	30	1,032	109,927	3,664
Nitey 2-7-6	7	100	1,727	509,411	5,094
Phoebe-A 36-8-6	3	30	735	80,395	2,680
Phoebe-B 36-8-6	3	30	512	94,032	3,194
Reed 1-7-6	1	10	108	103,982	10,398
Sokotneche 1-7-6	4	60	1,012	127,446	2,124
Total I. T. I. O.	33	390	12,723	3,157,398	8,096
Magnolia Pet.					
Cruse 2-7-6	1	10	725	34,688	3,469
Pattey 35-8-6	2	20	590	13,679	684
Total Magnolia	3	30	1,315	48,367	1,612
Mid-Continent Pet.					
Wadsworth 36-8-6	7	80	1,150	291,817	3,636
Pine & Phillips Pet.					
Pattey 35-8-6	2	20	1,956	42,785	2,139
Producers & Refiners					
Dungan 35-8-6	2	30	120	60,895	2,030
Prairie O. & G.					
House 2-7-6	4	40	2,115	297,538	7,438
Roxana Pet.					
Smith 1-7-6	1	10	17	2,587	259
Sinclair O. & G.					
Cosar 36-8-6	1	10	1,115	65,362	6,536
Shaffer O. & R.					
Narcome 36-8-6	1	10	60	3,365	337
Superior Oil					
Wadsworth 1-7-6	1	10	21	5,555	556
Texas Company					
Coker	1	10	660	70,908	7,091
Tidal Cos.					
House 1-7-6	3	30	1,775	211,252	7,042
Jackson 1-7-6	1	10	75	15,854	1,585
Total Tidal	4	40	1,850	227,106	5,677
Total Little River	91	1,010	36,032	6,331,085	3,199

One-Well Pools

(These pools operated under restrictive agreement and wells pinched to 100 barrels per day each)

Company Lease - Location	Wells Producing Feb. 1	Acres Developed	Production Feb. 1	Gross Production to Feb. 1	Recovery Per Acre
Prairie O. & G.					
Baker 24-9-5	1	10	50	32,602	3,260
Gypsy Oil Co.					
Brown 33-8-6	1	10	50	27,681	2,768
Doser 7-8-6	1	10	100	10,810	1,081
Mid-Continent Pet.					
Smith 5-7-7	1	10	35	2,606	261
Independent O. & G.					
Hotulke 23-7-6	1	10	104	13,156	1,316
Snowden & McSweeney					
Tiger 13-7-6	1	10	170	5,812	581
Barnsdall Oil Co.					
Fife 14-8-5	1	10	0	3,345	335
I. T. I. O. Co.					
*State 16-8-5	1	10	194	2,674	267

*Producing from Simpson formation—failure in Wilcox.

Gross Recovery by Companies, Seminole District to February 1, 1928

Company	Wells Producing Feb. 1	Acres Developed	Production Feb. 1	Total Production To Feb. 1	Average Recovery Per Acre
Amerada	41	490	14,974	9,751,102	19,900
Atlantic Oil Prod.	19	260	3,662	2,253,245	8,666
Barnsdall Oil Co.	80	815	30,452	10,543,050	12,887
Blackwell O. & G.	7	80	3,806	875,574	10,945
Carter Oil Co.	132	1,510	35,262	22,104,112	18,277
Continental Oil	8	80	2,160	1,277,247	15,966
Crosbie, J. E.	2	20	0	925,620	46,281
Empire G. & F.	17	280	5,255	2,867,176	10,239
Gypsy Oil Co.	101	1,190	32,274	12,017,896	10,099
Independent O. & G.	41	480	7,306	7,165,875	14,929
Indian Terr. Ill. Oil	136	1,500	32,777	17,651,149	11,768
Interocean Oil	1	10	20	41,327	4,133
Kingwood Oil	3	50	1,315	725,578	14,512
Magnolia Pet.	65	690	23,367	6,442,268	9,337
McCulloch	2	30	380	115,166	3,838
Mid-Continent Pet.	52	530	6,453	6,762,102	12,759
Mid-Kansas O. & G.	5	90	414	315,247	3,503
Minnehoma Oil	4	40	108	397,420	9,936
Phillips Pet.	8	110	187	514,373	4,676
Pine, W. B.	1	10	30	935	94
Pine & Phillips Pet.	2	20	1,956	42,785	2,139
Prairie O. & G.	75	850	20,268	10,983,663	12,922
Producers & Refiners	2	30	120	60,895	2,030
Philmack-Marland	0	20	0	113,335	5,667
Pure Oil Co.	51	540	14,405	9,631,736	17,836
Roxana Pet.	18	220	5,599	1,957,384	8,897
Searight O. & G.	0	40	0	541,445	13,526
Shaffer O. & R.	9	100	1,875	419,445	4,194
Sinclair O. & G.	57	580	31,683	10,520,528	18,139
Skelly Oil Co.	2	20	718	836,611	41,833
Slick, T. B., Inc.	14	170	3,903	3,417,324	20,102
Superior Oil Corp.	7	70	831	1,369,165	19,560
Texas Co.	39	400	16,960	3,885,018	9,725
Tidal Co.'s	44	500	11,507	6,251,355	12,502
Turman Oil Co.	9	80	2,564	1,798,025	22,475
Twin State Oil	12	120	4,270	2,125,919	17,711
Wilcox O. & G.	8	80	2,978	902,417	11,280
Grand Total	1,074	12,105	324,213	157,603,509	

At the Center of Production

Metric Meters

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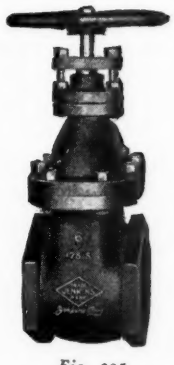

Fig. 325
Screwed, Jenkins Standard Iron Body Gate Valve

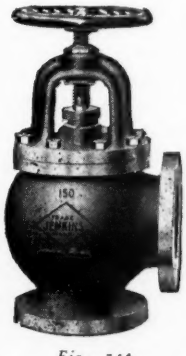

Fig. 144
Flanged, Jenkins Standard Iron Body Angle Valve

A work of precision and care

The making of a Jenkins Iron Body Valve is as much a work of precision and care from beginning to end as the making of a Jenkins Bronze Valve. The Jenkins "Diamond" mark brings to the engineer the same unfailing indication of a valve made for the maximum service not merely the average.

Care starts with the selection of metal. Metal is proved by analyses by competent metallurgists before and after casting. Machining is held to close limits, assembly is painstaking, while inspection is thorough and frequent in the various stages of manufacture.

This care is not enough to satisfy the makers of Jenkins Iron Body Valves, for each valve is given a series of tests far in excess of the pressure for which it is recommended.

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A Tret-O-lite Plant *is NOT expensive*

Operators usually can arrange a Tret-O-litE plant, using equipment already on the lease. No heavy initial investment—no expensive equipment to stand idle when need for large treating capacity has passed.

The Tret-O-litE method is the fast, economical and THOROUGH method of recovering oil from emulsions.

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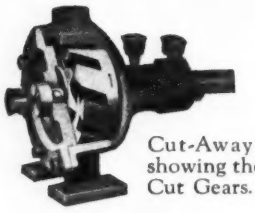


Cut-Away section showing the Helical Cut Gears.

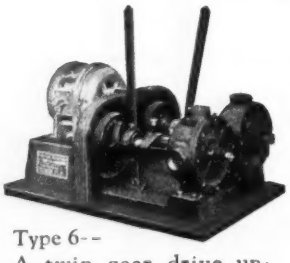
A New Adaptation Of An Old Mechanical Principle

ALTHOUGH the Rotary Pump is an old invention the Perfection Rotary Pump is constructed in an entirely new way, that is mechanically and scientifically correct, and differing very materially from any other rotary pump on the market. The outstanding feature in the Perfection Pump is the helical (spiral) cut gears, a well established mechanical principle, which results in a very highly efficient, durable and trouble-proof pump, remarkably free from vibration.

Study the illustration above and note that there are only two moving parts, the rotor and the idler pinion. Note also that the teeth in the pinion and the rotor go into mesh in a smooth and gradual way, preventing back lash and eliminating vibration.

The shearing cut on the column of liquid at the intake and discharge ports is another feature that makes the Perfection a smooth running pump.

Write for our new Bulletin No. 271 which fully describes the construction of the Perfection Rotary Pump and illustrates several types built especially for the Oil Jobber.



Type 6--
A twin gear drive unloading pump with motor.

Perfection Manufacturing Co.
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Sold by Oil Equipment Jobbers in most of the principal cities.

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Filter Presses — ***Wax Moulding Presses***
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Wax Testing Presses — ***Paraffine Wax Sweater Plants***
Complete Wax Plants designed and built
Pumps, Stills, Towers, Condensers and other Oil Refinery Equipment
Oil Burning Systems — ***Complete Power Plant Equipment***

BETHLEHEM STEEL COMPANY, *General Offices, Bethlehem, Pa.*

District Offices
New York Boston Philadelphia Baltimore Washington Atlanta Pittsburgh Buffalo Cleveland Detroit Cincinnati Chicago St. Louis San Francisco Los Angeles Seattle Portland

of Feb. 24, last, it had 305,189 barrels from 1,084 wells, or 281 barrels per well. Its decline, on the basis of well averages, was 646 barrels in 209 days, or a little more than 3 barrels per day per well as of those two dates.

The Seminole district appears to be an excellent argument for acquiring leases in scattered blocks, or "checkerboarding." Nearly every company in the field has leases that have not paid out but whose losses are offset and more by properties with very high recoveries.

What will be the final record is unpredictable at this time. The several pools taken together are maintaining a handsome production—at this time above 300,000 barrels per day. Several companies still have high daily production and probably will maintain it for some time. Many leases which now fall below the 10,000 barrel-per-acre figure will exceed it this year. It is safe to assert that the district as a whole has much more than returned development costs, although not all companies have fared so well, and with the residue production will in time yield substantial returns.

SPRINGFIELD, Ill.—Weaver Mfg. Co. explains the Weaver method of lubrication in "Lubrication Profits", a booklet it has off the press. A survey of the market for this service was made by the company and it claims that there are only 15,000 service stations in the country completely equipped to lubricate the 22,000,000 passenger and commercial cars in use today.

Actual figures taken from daily records of the company's own laboratory garage are published in proof of the profits the company says are possible, and the amount of time saved with the new Weaver method.

Equipment for this service includes the new Weaver drive-over auto lift and valveless bucket pump, which draws the old grease out of differentials and transmissions, flushing and refilling them with new lubricant.

OKLAHOMA CITY, March 8.—Increasing activity in wildcat territory adjacent to Oklahoma City has prompted oil companies to watch the territory more closely. The Oklahoma City chamber of commerce has arranged for two rooms in the Petroleum building to be given to the scouts for a meeting place.

ARDMORE, March 8.—The Wirt Franklin Oil Corp. entertained with a dutch lunch at the March 3 meeting of Ardmore district geologists. The program consisted of talks on liners, by A. M. Hepler, and completion of rotary wells, by O. H. Stout, followed by round table discussions.

Color Desired, Not Cost, is Proper Basis For Comparing Filtering Systems

By L. L. Davis*

Presented before Refinery Engineering Division, A. I. M. E. Meeting, New York, Feb. 22-23

Many Burns Cut Filtering Costs

Mr. Davis shows, in this paper, that at present there seems no economical way of reclaiming the fine clay used in contact filtering—therefore the clay is used once and then thrown away.

On the other hand, coarse clay used in percolation filtering can be burned in the new furnaces as much as 40 times and reused. This makes filtering costs all in favor of the percolation system, the author points out, adding, however, that contact filtering can produce high degrees of quality in some cases that cannot be attained by the percolating method.

It is doubted whether his figures would hold good on the Pacific coast where the cost of fine clay for contact filtering is very low and the cost of coarser grades, plus freight rates, is very high.

THE rapid increase in the use of pulverulent adsorptive materials in the so called "contact filtration" process for decolorizing lubricating oils makes it desirable to consider some of the basic principles involved. The commercial methods and types of equipment now in use are fairly well known, having been extensively described in the trade journals. In spite of this, there appears to have been very little published concerning the factors which must be considered in the selection of a process or of a decolorizing material.

It is commonly understood that contact filtration more or less closely follows the laws of adsorption. These principles have been very thoroughly described by Gurwitsch (1). However, Wilson (2) considers the decolorizing action of fuller's earth to be due to an oxidation process followed by absorption and Benedict (3) indicates this may have some foundation in the case of fixed oils.

The contacting of neutral mineral oils seems to be adsorptive in character and apparently follows Freundlich's law of absorption which may be expressed by the formula:

$$X \div M = A\,C^{P}$$

X—Color material absorbed by the clay.

M—Amount of clay used.

C—Concentration of color material after equilibrium.

A and P—Constants for a given oil and clay.

Figure 1 gives the decolorizing curve for a neutral, dark colored cylinder stock when contacted with various quantities of clay, curve R being made with natural Riverside, Texas, fuller's earth and T being made with an acid treated clay from Texas.

As the Tag-Robinson color is inversely proportional to the depth of color, the reciprocal of these colors can be assumed to be a function of the concentration of coloring matter. The values of $\frac{X}{M}$ and C can, therefore, be calculated by using the reciprocal Tag-Robinson colors, and when these values are plotted on logarithmic paper a straight line curve results. This is known as Freundlich's adsorption isotherm. Figure 2 gives such isotherms for the two examples given above.

From these curves the constants A and P can be determined, giving the following adsorption formulas for the two clays in question, when used on the dark cylinder stock.

Riverside fuller's earth $\frac{X}{M} = .126\,C^{3.32}$

Acid treated Texas clay $\frac{X}{M} = .342\,C^{2.30}$

X=Color decrease—Tag-Robinson reciprocals.

C=Final Color in Tag-Robinson reciprocals.

M=Clay used in per cent.

A study of Freundlich's equation shows that if two clays have different exponents P, or in other words if the adsorption isotherms have different slopes, the relative efficiencies of the two clays will be different for each finished color.

This can be derived mathematically

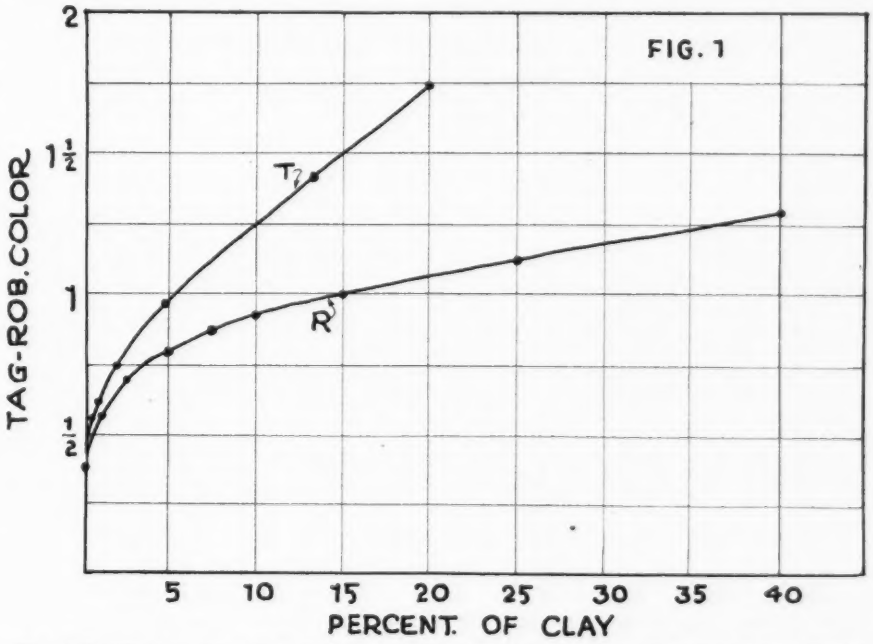

Fig. 1—Decolorizing curve of a neutral, dark colored cylinder stock when contacted with various quantities of clay, curve R being with natural, Riverside, Tex., fuller's earth, and T being made with an acid treated clay from Texas

*Chemist, Marland, Refining Co.

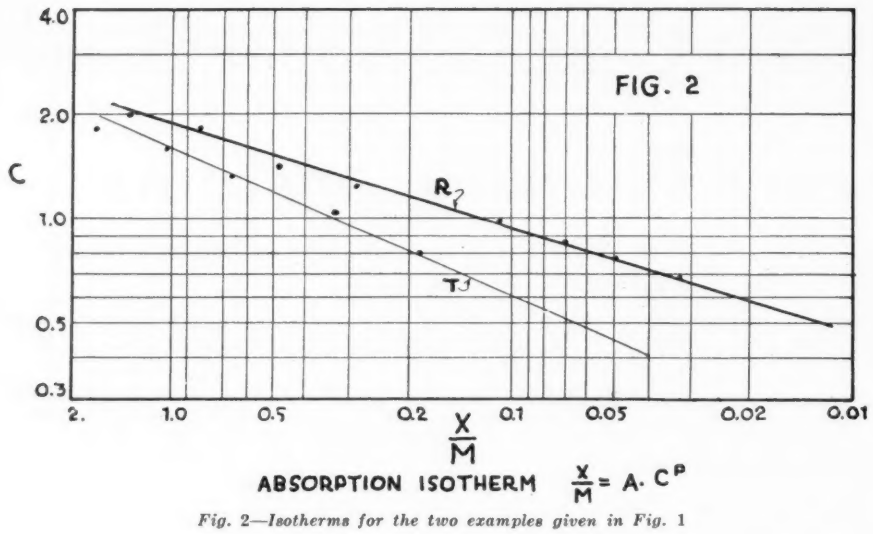

Fig. 2—Isotherms for the two examples given in Fig. 1

from Freundlich's equation to give:

$$\frac{M}{M^1} = \frac{A^1}{A} - C - (P^1 - P)$$

Substituting the values for A and P found above and multiplying by 100 to obtain the efficiency in terms of per cent of Riverside clay, this formula for the two clays in question becomes:

$$\frac{100\,MR}{MT} = 271\ C^{1.02}$$

This formula is shown graphically in Figure 3 and shows the comparative efficiency of the two clays for the oil used. It will be seen that the relative efficiency of the acid treated clay when used to decolorize neutral cylinder stock increases rapidly with the lighter finished colors.

THESE considerations show the absurdity of the usual practice of evaluating clays by reporting one in percentage of the other. Such a comparison is fallacious and has frequently led to misunderstandings between marketers of decolorizing clays and prospective customers. It should be remembered that the efficiencies will vary as greatly between different oils and between batches of the same oil processed in different ways as between different colors so that the exact conditions of any comparison must be fully understood.

In the case of contacting treated oils in the acid stage, either for neutralizing, or neutralizing and decolorizing, the relationship is not so clear. However, decolorization appears to follow adsorption after the neutralization is completed and the variation in comparative efficiencies of clays for different colors holds true. No mathematical relationship has yet been developed, but the efficiency curves may be determined with a fair degree of accuracy directly from the decolorization curves by determining the ratio of weights of different clays used to obtain the same finished color.

Figure 4 shows the decolorization curves for 5 different bleaching materials when contacted with an acid treated cylinder stock from Tonkawa crude, carrying 0.3 per cent acid sludge.

C—Treated California clay in pulp form.

T—Treated Texas clay in pulp form.

G—Treated German clay in dry form.

U—Natural Utah clay.

R—Natural Riverside Texas clay.

It should be noted that neutralization was accomplished with approximately the same quantities of clay and with nearly the same resulting color. With the lighter colors, however, the quantity of the different clays used varies widely. From these curves the relative efficiencies of the various clays for each color has been determined and plotted in Figure 5. This clearly shows the change in efficiency with the color desired. Thus if it is intended to neutralize the oil only, the cheapest clay, viz. Riverside, would be far more economical whereas, if a 2-color is desired the use of the most expensive clay, that is, C, would be possible.

In addition to the actual neutralizing or decolorizing efficiency of various clays, their relative stabilizing effect must be considered. This is particularly true in the case of pale oils. Figure 6 shows various color stability tests over a period of 20 days for 180 pale oil contacted with Riverside fullers earth and with the German treated clay. The problem was to determine the relative value of the German clay to produce a stable 3 A.S.T.M. color. It will be seen that ½ per cent of the German clay or 1 per cent of Riverside gave an initial color lighter than 3 A.S.T.M., indicating an efficiency for the German clay of 200 per cent. However, both oils darkened rapidly. It was then found that 1 per cent of German or 4 per cent of Riverside clay was required to give a color, which would not darken beyond 3 A.S.T.M. in 20 days, making the actual value of the German clay 400 per cent of Riverside.

Revivification of Fine Clays

IN LAST year's meeting, Walter Miller stated: "The lack of any practical method of recovering the finely ground fullers earth for reuse,

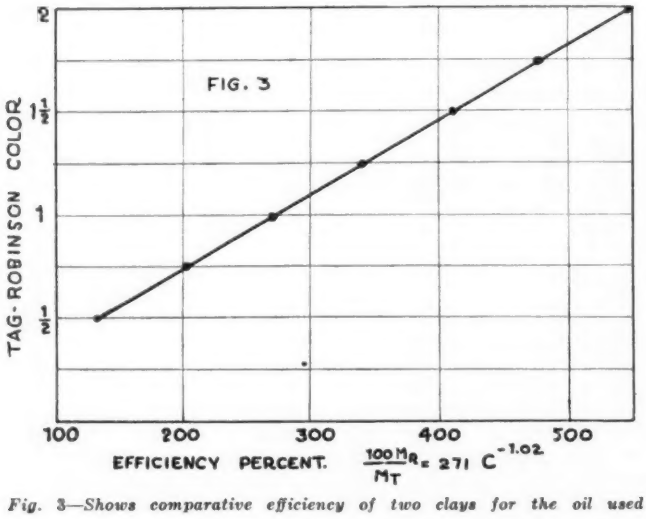

Fig. 3—Shows comparative efficiency of two clays for the oil used

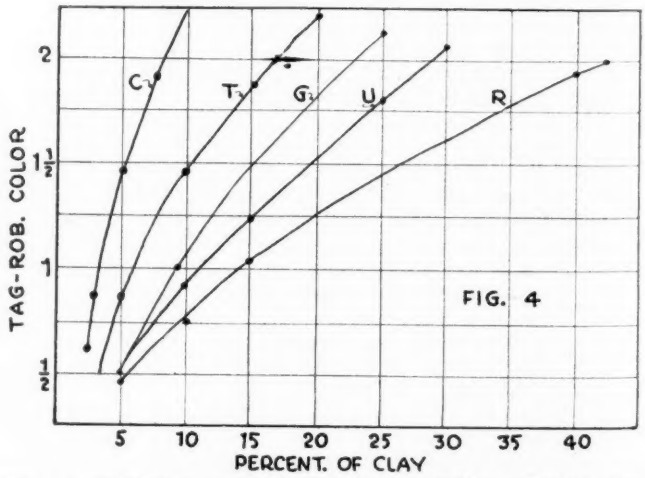

Fig. 4—Decolorization curves for 5 different bleaching materials when contacted with an acid treated cylinder stock from Tonkawa crude carrying 0.3 per cent acid sludge

PROBLEMS FACING THE INDEPENDENT FILLING STATION — No. 9

Where are the biggest profits?

—in "Unknown" brands—"Well-known" brands—or both?

A glance at the filling stations in your town will show you that all dealers are not in accord on this question.

One dealer may offer as many as eight brands of oil. Other dealers carry two brands. Still other dealers have one brand only.

And there is another angle to this situation. Some dealers push unknown oils. Others push little-known oils. Another group push the best-known oil.

Are there any facts which will show you where the biggest profits lie? Yes. We have been studying this question. We have made a nation-wide investigation of filling station operation.

Our Filling Station Specialist will gladly go over our findings with you. He will also discuss with you other selling problems that are perplexing.

We do not promise that he will be able to turn your station into a gold mine overnight. But we do think that you will find it well worth your while to talk with this man.

A card to our nearest branch office or a word to the regular Mobiloil salesman will bring him.

To make worthwhile profits you must know the answers to these questions

1. How can you meet today's competition?
2. How can you cut down the number of slack hours?
3. How can you better please your customers?
4. What makes customers come back?
5. What makes transients stop?
6. What makes women drivers buy?
7. What makes the farmer buy?
8. How can you compete successfully with big refiners?
9. Which brings most profits—"private" brands, "public" brands, or both?
10. How can you make larger sales to each motorist?
11. How should you locate new stations?
12. What type of station should you erect?

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Besides being the SAFE way to clean, the Oakite way is the *efficient*, money-saving way, eliminating all unnecessary hand labor and reducing cleaning time to a minimum.

Booklets gladly sent on request.

Oakite Service Men, cleaning specialists, are located in leading industrial centers of U. S. and Canada.

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Industrial Cleaning Materials and Methods

40,000,000 Gallons

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This service has resulted mainly from discovery of markets for producers and manufacturers and location of suitable sources of supply for buyers. This business, handled in conjunction with North American Car Corporation export and domestic oil warehouses, has enabled customers to save thousands of dollars in advantageous purchases; has allowed them to meet emergency requirements, and in other ways has permitted the consummation of negotiations that would otherwise have been impossible.

Does anything indicate more clearly that North American service is more than just leasing service? Here is well-rounded, definite and important co-operation that you really should know about. If you ship in tank, refrigerator or Palace poultry cars, we earnestly suggest that you write for full details.

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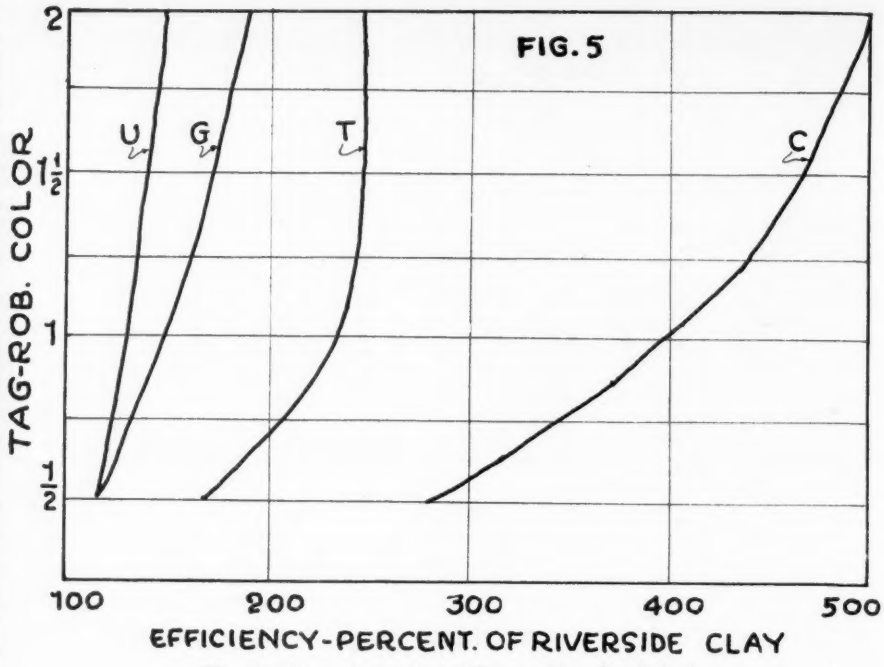

Fig. 5—Shows change in efficiency with color desired

necessitating the discarding of the earth after one using, is quite an expensive proceeding. This is not offset by the somewhat cheaper price of the average fine clay used for dry contact bleaching and is accentuated in the case of the very expensive acid treated types. Incidentally, the increasing use of the multiple muffle hearth furnace for burning and regenerating the coarse fuller's earth is materially decreasing the cost of percolation filtering."

The problem of revivifying fine earth is being studied intensively by many organizations. Two principal methods of attack are being followed, first, by burning the carbonaceous matter from the clay, and second, by the use of solvents.

The majority of the highly efficient clays, such as the acid treated pulps, lose their decolorizing ability if burned, so that this method is limited to fuller's earth and such dry acid treated materials as are largely silica.

Figure 7 shows the effect on the efficiency of fresh Riverside fuller's earth when heated to various temperatures between 100 degrees and 1200 degrees. Curve A shows the color obtained with 15 per cent of the dried clay on acid cylinder stock, while curve B shows the relative efficiency calculated to the same original weights before burning. It will be seen that there is a rapid break in efficiency above 300 degrees Fahr. and that at

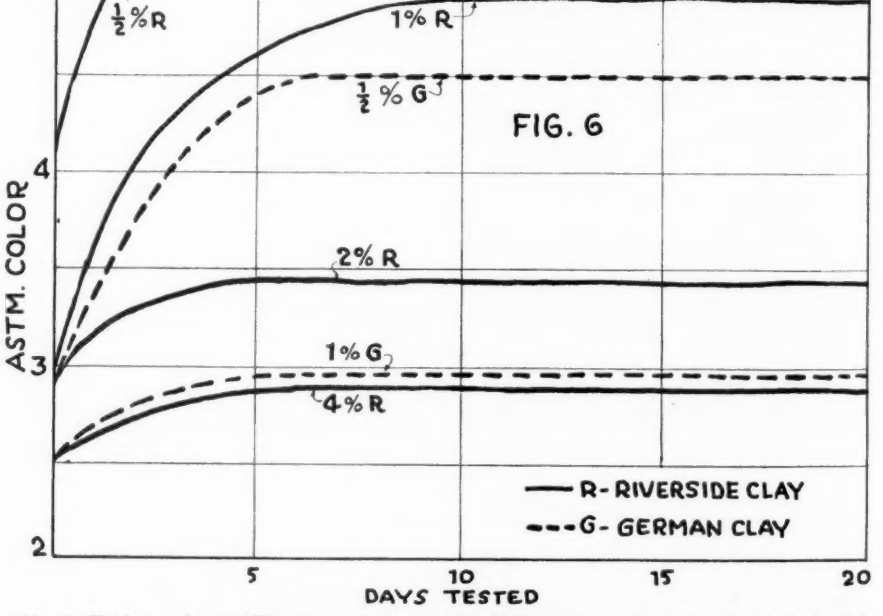

Fig. 6—Various color stability tests over a period of 20 days for 180 pale oil contacted with Riverside fuller's earth and with the German treated clay. The problem was to determine the relative value of E the German treated clay to produce a stable No. 3 A. S. T. M. color

1200 degrees Fahr. the clay is only 50 per cent efficient.

Actual tests on burning once used clay which had been thoroughly washed with gasoline show that a temperature of 1100 degrees must be used if the carbonaceous material is completely removed. Burns in an electric muffle furnace give efficiencies of about 60 per cent while tests in an experimental multiple hearth furnace gave efficiencies between 40 and 50 per cent. This indicates that there is little possibility of reclaiming fine fuller's earth by burning.

There have been a number of methods suggested to reclaim decolorizing materials by the use of solvents, and some of these methods show interesting possibilities. Thus Parsons (4) uses carbon tetrachloride, ethyl alcohol and acetic acid, Chappell (5) uses acetone, methyl alcohol and hydrochloric acid; Rosenbaum (6) uses liquid sulfur dioxide and Prutzman (7) uses benzol alcohol and water.

Using the constant boiling mixture of alcohol and benzol suggested by Prutzman, efficiencies as high as 90 per cent have been obtained from individual samples of used Riverside clay. The solvent methods, therefore, have possibilities of successful development but must still be considered as more or less experimental.

Contact versus Percolation Filtration

IN ORDER to adequately compare the two methods of filtration, the dual purpose of contacting must be given consideration. It is an accepted fact that acid treatment followed by contact filtration to neutralize the acid oil gives a superior product to that obtained by acid treatment, chemical neutralization and percolation. Neutralizing by contact filtration overcomes all the emulsion troubles resulting from neutralizing with chemicals and shortens and simplifies the treating operation. The equipment costs but little more than the additional agitator capacity required for chemical neutralizing and the operation is positive and subject to accurate control.

The contact filter, therefore, plays an important role in the production of high quality lubricants which can not be performed by the percolating filter. A comparison of the two methods should, therefore, be limited to decolorizing after neutralization.

In order to compare the two methods let us assume that a given cylinder stock neutralizes by contacting to a color of ½ Tag-Robinson and the problem involved is to decolorize it to a finished color of 1. This can be done first, by using sufficient more clay in the first contact to finish a 1 color. This will require contacting

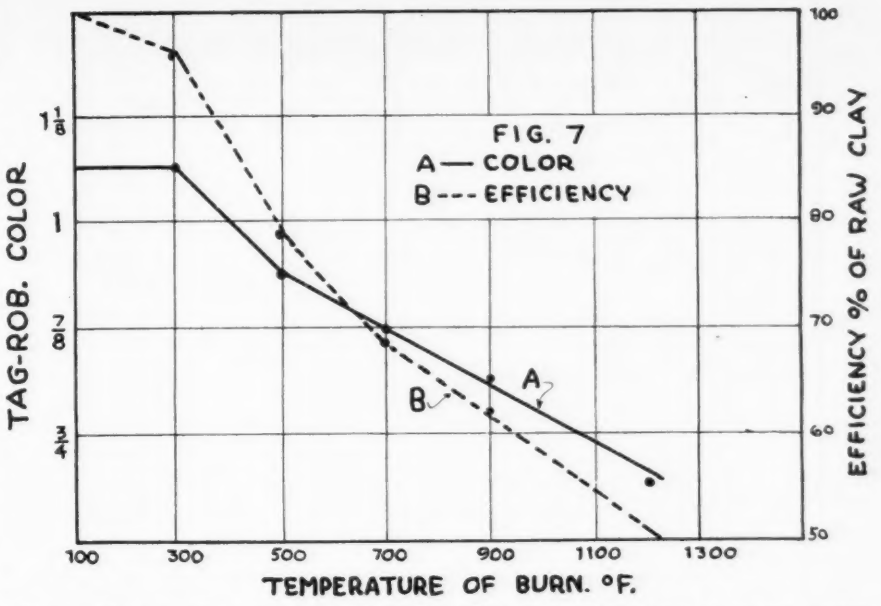

Fig. 7—Effect on efficiency of fresh Riverside fuller's earth when heated to various temperatures between 100 and 1200 degrees Fahr.

to 1¼ color to allow for darkening during dewaxing and reducing. From Figure 4 it will be seen that this additional Riverside clay amounts to about 14 per cent. Second, the oil can be finished as ½ color and then recontacted to make 1 color. Figure 1 shows that this would require 14½ per cent of Riverside clay. Third, the ½ color finished oil can be percolated through coarse fuller's earth to give 1 color. Experience shows that this requires about 133 pounds of Riverside clay per barrel when using an average clay (1 to 40 burns if a multiple hearth furnace is used).

Table No. 1 represents the comparative cost of such an operation. The direct expenses cover labor, steam, power, normal maintenance, etc. but do not include plant overhead or investment charges.

In the first case the extra clay is added at the time of the first contact and therefore carries only a nominal operating expense to cover the extra labor, pressure filtering, etc. However, if the oil is decolorized at this point the 20 per cent petrolatum content must also be treated, thus materially increasing the cost of decolorizing per barrel of finished bright stock.

These costs indicate that until a method of reclaiming used fine clay or until a relatively cheap, highly efficient decolorizing material is available, the percolating filtration method will prove more economical for final decolorization.

The contact process, however, fills an important role in the production of high quality lubricants which cannot be performed by the percolating filters, and it therefore seems that a combination of the two is the correct solution to the problem.

Table 1

Relative cost of Decolorizing Bright Stock from ½ to 1 Tag-Robinson Color.

	I Single contact	II Double contact	III Percolation
Clay used per bbl. (pounds)	44	46	133
Clay cost per ton	$14	$14	$20
Net cost per ton	$14	$14	.50
Times used	1	1	40
Cost burning			.85
Clay cost per bbl. of charge	$ .308	$ .322	$ .090
Cost per bbl. direct operation	.050	.196	.270
Total cost per bbl. charge	.358	.518	.360
Yield finished bright stock	80%	98%	98%
Cost of decolorizing 1-bbl. finished bright stock	$ .448	$ .528	$ .367

TULSA, March 10.—J. S. Cosden, founder of Cosden & Co., now the Mid-Continent Petroleum Corp., has purchased the properties of the Riverland Oil Co. in the Clearview pool of eastern Okfuskee county. Mr. Cosden recently announced the formation of a company under the old name, Cosden & Co. The Riverland properties consist of 440 acres, partly developed, with about 4,500 barrels production from the Wilcox sand, coming from four wells, partly in the flush stage. Consideration was reported to be $600,000.

Crouse-Hinds Co., Syracuse, N. Y., manufacturer of electrical products, has devoted one of its new catalogs entirely to airport lighting equipment, in which it describes lights for field markings, revolving beacon for the aviator's guide, boundary lights, obstacle lights, marker of approach lights, hangar illumination, landing field lights, wind tee or wind sock illumination, etc.

Illustrations and complete description of the various types of lights are included. Lighting equipment for both roof and interior of hangars is included.

1 Petroleum Tech. Trans. D. Van Nostrand P. 397.
2 Petr. Zeitsch. Dec. 10, 1926. P. 1327.
3 Journal Oil and Fat Ind. II 62, 1925.
4 U. S. Patent 1,112,650 Oct. 6, 1914.
5 U. S. Patent 1,488,805 Apr. 1, 1924.
6 U. S. Patent 1,649,193 Nov. 15, 1927.
7 U. S. Patent 1,633,871 June 28, 1927.

Keeping Out of Trouble in Two Ways

THE refiner who takes on a new process without looking it over and studying it thoroughly from all angles is likely to get into trouble in one of two ways. First, the process may not be workable at a profit as it appeared at first and second, it may be covered by one or more patents, so that as soon as he begins to use it he will be sued for infringement.

On the other hand, if the refiner passes up a process that is offered him he may be overlooking something that would have brought him nice profits.

To safeguard the refiner against making these mistakes and having to pay through the nose for them, is the purpose of the system described in the accompanying series. The paper of which this is the last installment, was delivered before the Petroleum Division A. I. M. E. at the recent meeting in New York. Part 2 appeared starting on Page 51, March 7 issue, and Part 1 on Page 76, Feb. 29 issue.

Technical Control of Refinery Processes

By Ernest B. Phillips* and Albert E. Miller†

Part 3—Investigation of New Processes—Patent Searches

LET us now turn our attention to the investigations of new processes brought to the attention of an oil company by an outside party or group. This is not to be confused with the investigation of new processes developed within the company itself and which was discussed earlier in the paper.

Processes, and by these I mean also apparatus, auxiliary equipment, or products which are brought to the notice of oil companies, range all the way from mere ideas, without even a definite plan in the mind of some inventor, to complete commercial propositions often fully developed and fully protected by patents.

Such processes may cover most any subject. A few of those come regularly to the technical head of any oil company are processes for cracking oil, processes for producing or recovering sulfuric acid, manufacture of soaps and greases, vacuum distillation processes, new types of pumps, oil burners, or investigations of deposits of fuller's earth.

Usually there are three persons to be considered in any new proposition. They are the inventor, his financier, who is also sometimes his promoter, and his lawyer. As a rule, the idea is first brought to the technical executive by letter or in the form of an interview. In the majority of cases, the new proposition is disposed of at this first contact, as most of them are not practical or of any value in the light of the experience of the man in charge of this department. By asking a few well chosen and pertinent questions, the whole matter is often ended as far as the oil company is concerned.

If, however, the idea presented is of sufficient importance that the proposition must be investigated, then the technical man must be called in and probably arrangements are made for a demonstration of the process. If the new proposition is in the form of a product, samples may be sent to the central laboratory and there investigated.

According to the degree of development of the idea and the scale on which it can be demonstrated, one man, or probably a technical man and several helpers, will be sent to the location of the plant or apparatus to be investigated and a preliminary opinion obtained as to the merits of the proposition.

In reporting an investigation of this nature, the report should be divided into two parts: First, a letter to the head of the technical department or to the person to whom the report is to be made, and second, the report proper covering the results of the preliminary investigation. The letter should be brief and should merely state name of the process, date of investigation, those present, with their connections, and the location of the plant where the investigation took place.

Attached to the letter should be the report of the investigation. The report may well be divided into the seven following classes of information as regards the process:

1. **Historical.**
2. **The process in its present development.**
3. **Record of the demonstration made by the investigator.**
4. **Commercial application of the process.**
5. **Comparison with other known similar processes.**
6. **Advantages and disadvantages of the process.**
7. **The investigator's personal remarks on the process, and his reasons for recommending its adoption or rejection.**

The following may serve as an amplified outline of a report of a cracking process. This outline really covers the questions, answers to which should be secured, so that the technical head will have as much information on which to base judgment as to whether or not the preliminary contact with the process should be followed up and a complete demonstration made:

Historical (1)

1. Who was the inventor, when did he first get his idea and how did he conceive it?

2. The inventor's present development of the process, where did he do his experiments and to what extent did he develop his ideas (laboratory or commercial scale)?

3. How did the inventor finance the development of his invention? Did the inventor form a company to de-

*Chief chemist, Sinclair Refining Co.
†Process chemist, Sinclair Refining Co.

velop or exploit the process? If so, give the name of the company, his present contract with it, the men interested, the location of the main office and in what state the company is incorporated? (Why?)

4. What has the company done to develop the process commercially? Who owns it now? Is the process patented? If so, who owns the patent? Is it in litigation? If so, with whom? Get the numbe of the patent and the number of patents and names of the patentees with whom there is litigation.

5. Will the company or inventor sell the process outright, or will they allow the use of the process on a royalty basis?

6. Who else has investigated the process? What did they think of it, and if possible, get a copy of their report.

7. Is the process being used by anyone else? If so, what royalty do they pay and what are the terms of their contract with the owners of the process?

The Process in Its Present Development (2)

1. Is the process as practiced at present in the laboratory, semi-commercial or commercial state?

2. Give a description of the apparatus used, with blue print or photostat, if possible. Obtain also photographs and an operating flow sheet.
   (a) Still shell, size, material, etc.
   (b) Type of tubes, length, size and material.
   (c) Mechanical agitator, if any—type, speed of agitation and type of drive.
   (d) Size and type of pumps, steam boilers, etc.
   (e) Vapor line and reflux towers.
   (f) Type of condenser, whether under pressure or without.
   (g) Casing head plant, or absorbent towers for non-condensable gases.

3. General Operation.
   (a) Whether a continuous or batch process.
   (b) Stock charged, gravity, initial and other general tests.
   (c) The capacity of the still, rate of charging per hour or minute, feed pump and control.
   (d) Pressure used and how controlled.
   (e) Preheaters and forewarmers.
   (f) Fire box, type and construction and insulation.
   (g) Circulation from bulk supply; type of artificial circulator.
   (h) Re-cycling.
   (i) Control of run and taking off vapors.
   (j) Condenser and run down tanks.
   (k) Total heating surface of still or tubes (gals. of distillation per hour per square foot of heating surface).
   (l) Fuel used, whether gas, coal or oil, and quantity burned per hour and per gallon of distillate made.
   (m) Any special features, such as catalysts, special methods of handling the carbon problem or any special feature of construction.

Record of Demonstration Run (3)

1. Condition under which run was made.
   (a) Condition of the plant.
   (b) Superintendent and helpers.
   (c) Oil stock used with complete tests of same.
   (d) Whether run was made continuously or batch?
   (e) Length of run, whether in one period or in shifts?
   (f) Data to be taken during the run.
   (g) Personal checking up of quantities of raw material handled, capacity of tanks and feeding rates.
   (h) Provide some method for checking up fuel consumption.

2. Log of run. Time important data taken, readings of instrument and remarks or observations made.

3. Yields.
   (a) Grade
   (b) Volume in gallons or barrels.
   (c) Weight in pounds.
   (d) Percentage by volume based on distillate.
   (e) Percentage by volume based on original stock. (In this run shall be included each finished product made, the amount of coke produced and the loss in fixed gases.)

4. Quality of products.
   (a) Comparison with original stock (fractional distillations, physical and chemical tests and graphs).
   (d) Do the products need rerunning or refining?

5. Rerunning of products from the still.
   (a) Operation.
   (b) Apparatus.
   (c) Length of the log (duration of run in hours).
   (d) Yield of products.

6. Refining of products.
   (a) Method.
   (b) Apparatus.
   (c) Yields and losses in treating. Special problems.

7. Fuel efficiency.
   (a) Total fuel burned.
   (b) Pounds of fuel consumed per gallon of oil run through process, of distillate made, and pounds of fuel per gallon of gasoline made.
   (c) Efficiency of fire box.
   (d) Temperature of waste fuel gases (analysis of these gases if possible).
   (e) Preheaters or forewarmers and gain in temperature from their use.
   (f) Temperature of residual oil drawn off or circulating through exchangers.

8. Efficiency of process.
   (a) Capacity of units—gallons or barrels.
   (b) Rate of charging in gallons per hour.
   (c) Barrels of distillate per square foot heating surface.
   (d) Average rate of distillation, rate percentage per hour based on the charging capacity of the still.

9. Cost balance.
   (a) Cost of raw material used per ton or per barrel oil run.
   (b) Value of products made.
   (c) Cost of raw material charged to still or used up.
   (d) Value of products made or of unused material left over.
   (e) Value of fuel consumed.
   (f) Labor cost.
   (g) Total investment in the plant.
   (h) Maintenance 10% of investment.
   (i) Interest on investment.
   (j) Allow for depreciation at proper rate.
   (k) Cost of steam and electricity.
   (l) Total cost of producing ..... gals. of gasoline.
   (m) Total value of products made.
   (n) Net profits per day or year.
   (c) Barrels of gasoline per year per dollar invested.
   (p) Profit per year per dollar invested.

   Note: If there are several runs, tabulated parallel and average, example:

Item	Run 1	Run 2	Run 3	Average
	.....	.....	.....	.....

Commercial Application of Process (4)

1. If on a laboratory scale how does inventor propose to operate the process commercially?

2. What is the largest size of units possible?

3. Will the plant be built in separate units or batteries?

4. Will it be operated as a continuous process or intermittently?

5. The total investment will be so much. You can charge so many barrels per day and the yield will be so much of such and such a product.

6. Do the products need rerunning or refining in order to make them marketable?

Comparison with Similar Processes (5)

1. Chemical process.
2. Cracking process.
3. Treating process.

Note: Compare the process with other known processes with respect to investment, size and yields, fuel economy, yield of gasoline per heating surface, cost per gallon, labor operation, safety from fire and explosion, rate of distillation and quality of products.

Advantages and Disadvantages (6)

1. Large or small capacity of plants.
2. High or low yields.
3. Obsolesence.
4. Fuel economy.
5. Quality of products.
6. Safety.
7. Depreciation and maintenance.
8. Simplicity of construction and operation.
9. Amount of labor needed for operation.
10. Do you need special castings or equipment or can the plant be built from standard parts?
11. Elasticity of the process or range of oils than can be used as stock.
12. Range of products obtained.
13. Is the loss in fixed gases large or small, and what is the nature of these gases?
14. Is there a large loss in coke and does the formation of carbon place difficulties in the way of operation?

First Task Is To Get Information On Process

THE first investigation of a process or contact with a new idea is practically an effort to obtain as much reliable information as possible regarding the proposition submitted. A consideration of this preliminary report then puts the technical head of an oil company in a position where he can decide whether or not the proposition is worthy of further consideration. In case this conclusion is reached, arrangements are usually made for a second demonstration.

This should be on a semi-commercial scale or even commercial scale, if possible. Enough men should be sent under some head technical man familiar with this line of work to take over the proposition and operate it over a long period of time, with the company's own men operating on their own oil and keeping their own data. No run should be shorter than 24 hours. It is not necessary to go into details as to the method of conducting such a test. One would, of course, obtain not only the information furnished in the preliminary report but carry the figures far enough so that there will be complete yield, fuel, cost, and other figures available for final study.

The technical man should not, however, overlook one important fact in conducting such a test in another man's plant. He must take into consideration the fact that the average inventor or party developing a new process has not the varied experience, or, we might better say, the specialized experience in oil refining that he has, and usually one must bear in mind that with the facilities of his own company and their experience at his demand, considerable improvement could be made in the construction and operation of the plant, and probably more efficient heating means, condensing means, and auxiliary equipment could be employed.

The investigator must always report the process as it actually is and the products as they are actually produced, but it is a good thing to also advise his chief as to the possibilities of the process and what one experienced in the oil industry could make out of it. As mentioned above, inventors often present processes to an oil company, but, due to circumstances, usually financial, they are not in a position to build any plant or to make a demonstration. In such a case, the ideas, if they look worthy of consideration, are developed on a sort of co-operative basis by the inventor and the oil company.

Prior Art Searches

AS MENTIONED several times earlier in this paper, one of the most important phases of technical control in the oil industry and one that is becoming every day more and more important is the subject of prior art searches. These searches must be conducted almost continuously for either one of two purposes. First, the prior art should be searched thoroughly to see what patent protection, if any, can be given new ideas which are conceived in the research, process development department, operating, or any other part of the organization.

These ideas may be along the line of a new process, may cover some new piece of equipment of apparatus, or may be a new product or composition. Second, it is always advisable to know from a study of the prior art if one is within his rights in operating a regular refinery process, or whether he is liable to litigation for infringing somebody's patented process.

The oil industry has moved in cycles and has seen many changes in the manner of operating and in just what at any particular time is considered the important product. This has led to the rather complicated patent situation at present. It is not within the scope of this paper to discuss this particular phase of the subject further.

Due to the difference in purposes of the two above mentioned kinds of prior art searches, the technique of carrying out the search is a little different in each case. When one is studying the prior art, it is best to make the search as systematic as possible and to keep the results of the search in a definitely classified manner so that they are readily available to patent attorneys or such others as may have to study or refer to them later. In making what is known as a prior art search to see what protection can be given a new idea, the entire field of that particular idea must be searched, but in making the second class of search, where one simply wishes to see whether or not the processes which he is already operating are old art, the search is usually made to find instances in the prior art which anticipate certain definite ways of operating a process or constructing a piece of apparatus in which one wishes to carry out a process.

The writers have found the following a very convenient system for conducting a prior art search and for reporting it in a classified, readily available manner.

The search proper may be divided into two main parts:

Part I—covering material searched or studied, and

Part II—containing references found pertinent to the subject on which prior art is desired.

It is well to divide the material searched into sections, such as the following:

Section A—Books.

Section B—Periodicals.

Section C—Patents.

Section D—Miscellaneous publications, such as, Dissertations, Bulletins, Brochures, and such as are not books or regular publications.

Section E—Reports, Affidavits, and other unpublished matter.

In each one of these sections, the material searched can be entered and given numbers so that they can be referred to later, and also for the purpose of cross entries which are made in the second part of the search under "References Found". In other words, each book, periodical or patent studied

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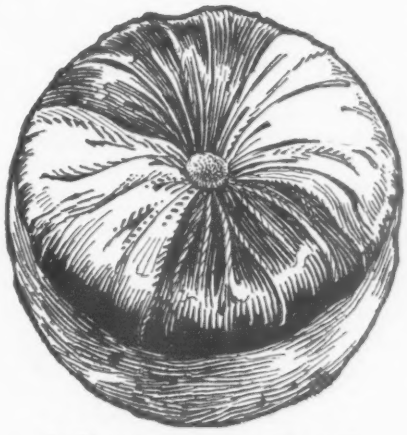

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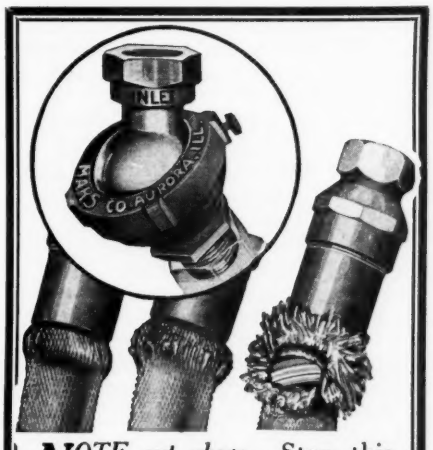

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It is very essential in a search of this nature that any literature source studied be entered in its proper section, giving enough detail on the reference that it can be readily located again in case those receiving the results of the search wish to study the original reference. In the case of a general search on a given subject for the purpose of obtaining protection for an idea, it is often sufficient to merely make an abstract of the literature reference and enter it under the proper section of material searched, giving it its proper item number under that section, but in case a search of the second class on specific points is conducted, it is better to use the two-part search idea, the first part being the sections of material searched and the second part a list of the classes under which the references found are divided.

IN THIS case the abstract prepared from a study of the original reference and which is entered under the proper section of material searched contains at the end a list of class references, in case there are any, together with the item number in that class.

The purpose of classification is that where a pertinent reference is found it can be entered and elaborated under the proper class so that, at the end of a search, one studying the subject on which the search was made can find all the references pertaining to any particular angle of the subject abstracted and listed in one place, with each item containing a cross reference back to the original source from which the information was obtained.

Searches of the nature outlined above should be carried out by some technical man familiar with the standard processes carried on in oil refineries and with research work in the oil industry. After he has completed his search, the results should be turned over to regular patent attorneys as they can best judge of the legal aspects of the matter.

One advantage of carrying out a search along the lines described above is that the search is accumulative and new items of material searched and references found can be incorporated at will. If the search is extensive and covers the literature both of English and foreign languages and all of the patents as well, it may become quite a volume, in which case it is advisable to prepare an author index. Each entry should be given the search symbol under material searched so that the reference can be immediately found if desired.

Conclusion

IN CONSIDERING the operations of the technical staff for a modern unit in the petroleum industry, we have covered a field that requires the annual outlay of a large sum of money. The natural question here is: "Does this expenditure justify itself?" The returns from such an investment appear in two forms, one tangible and the other intangible.

Bogey barrel workups induce both. Routine operators in any kind of a plant are content with current yields as long as stocks do not cause trouble in the specific operations with which they are concerned. A stillman wants throughput; a treater, freedom from trouble at the agitators and a wax plant man, good pressable distillate. When no laboratory control whatever is maintained over operations, each process yield is considered satisfactory in comparison with previous operations.

If, however, operators know that control breakups of stocks for full potential yields are to be made on the exact materials they handle each month, the natural tendency will be to watch details of operation, quality of products and yields closely to avoid censure from the superintendent. The value here is intangible, but nevertheless, it represents thousands of dollars per year in reduced refinery costs and in ultimate earnings.

In another direction, bogey barrel workups have a substantial value. A superintendent cannot demand greater yields per barrel of crude run from his operators unless he can lay before them positive evidence that that crude actually contains those added quantities. When breakups are made on specific stocks charged to stills and results are set up against refinery yield statements, defects in commercial operations are discovered.

THIS kindles the interest of the foremen on the job and spurs them on to get the highest yield and quality possible from the materials they handle. In many cases, yields lost in primary operations can be recovered in secondary ones, but this means a waste of a certain amount of fuel and a loss in still capacity, both of which considerations run up the overall operating costs. The ideal operation is to separate all the desirable products in continuous, one pass operations and the nearest approach possible to this ideal is the prime object of bogey barrel control. Practically complete separation of test distillates in one pass operations as against poor fractionation and secondary cleanup may mean as much as 5 cents per barrel of crude run in savings. There can be no question but that such a saving justifies all the expense involved. Bogey barrel runs supply the means for finding out where improvements in yields can be expected and serve as a checkup after better operating conditions have been established.

Passing to the semi-commercial operation with actual or proposed plant processes, this class of work reveals the shortcomings of current equipment and points the way to improvements. Here, individual steps can be followed in minute detail and the degree of refining obtained, closely watched. In many cases, the causes for the failure of end products to meet exacting specifications can be located and the plant equipment modified with a modest outlay of capital. Much more valuable results in this field come from the conception of entirely new ideas for processes or products.

These usually originate in efforts to solve some troublesome current problem. All such matters serve as the basis for patent applications and, in this way, the company is able to build up a reserve of useful practices of potential value, some of which might acquire great worth.

THIS is particularly true at this time when the industry is faced with great quantities of very refractory crude oils. The vigorous following of all suggestions in this field, keeps the staff engaged with problems months or even years ahead of current operating requirements and provides experimental data upon which commercial plants can be constructed. The cost for this service is only a small fraction of the real value possible in the ultimate results.

One hardly needs to point out the importance of having first hand information on all new processes, apparatus and products offered to the company. The purpose for which an inventor designed a process may not be of immediate interest to the company, but no one can predict when changing conditions might create a demand for it.

Unless all promising ideas are followed up systematically and their relations to current or anticipated problems fully known, the company will not be in a position to estimate their possible values and therefore, will be handicapped in negotiating for the purchase or use of those considered important. Not to be overlooked in this field are the personal contacts company representatives are able to maintain with leaders in kindred lines of business.

These contacts throw into relief the prevailing trends in the industry and focus the attention on probable future changes in practice or products. Money spent for this class of work usually does not pay a direct return, but its indirect value is very high.

The patent search division of the activities of a technical staff is virtually a new development and few organizations have pushed this angle of the question to the limit of its possibilities. The potential value of this class of work has been set forth in that section of the paper devoted to this subject. Its primary value, of course, lies in the protection afforded the company against unwarranted infringement suits.

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instances when opposing patent attorneys can be shown the prior art applicable to the particular case at issue. An organization having such information in shape for immediate use has an insurance policy of value all out of proportion to its low cost. Prior art searches also furnish the company with substantial backing in all patent matters it may wish to press on its own account. With such a fund of information to draw upon, patent attorneys can inform themselves on the vital points in any proceeding and advise when patent protection is worth obtaining.

At our present, highly developed stage of refinery practice, it is only natural that many companies should have overlapping patent protection in certain fields and it is of first importance that each should know exactly where it stands in relation to all the others. Attempts to negotiate agreements for the exchange of rights in such a case cannot be carried out with complete success from the viewpoint of any single company unless that company knows the prior art and has the patent history of all matters involved. When settlements for patent infringements such as are frequently awarded by courts are set up against the total cost to a company of its patent search work, it will be seen that no investment of company funds can pay greater real dividends.

The proper management of the huge resources entrusted to executives in the oil industry today calls for the exercise of sound judgment on many diversified activities. The successful administration of such a responsible position rests principally upon the possession of accurate information along the three following lines, knowing (1) as far in advance as is humanly possible what the market will be demanding in quality and quantity of petroleum products, (2) what kinds of crude oils are and will be available, (3) what kind of processes will be needed to produce them at a profit.

The organizations that maintain full technical staffs for control of all refinery operations will have the information they need and will be able to hold their places in the front line of the industry. Those that do not, however, will not remain long in the running. The activities of a complete technical staff touch every vital interest of the company and furnish the standards against which the efficiency of all operations are measured.

The cost of the service rendered by such a staff is returned over and over again in lower production costs and higher quality of commercial products. To refinery people who have not given serious thought to technical control of refinery operations, our parting word is to go home and at once apply as much as your resources will permit and set aside for expansion a reasonable portion of the gains its practice brings to you.

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Visiting Around the Refineries

By Paul Truesdell

National Petroleum News

Will Vapor Phase Cracking Pay?

WALTER MILLER, in his paper summarizing progress in the refining art during his year as chairman of the refinery engineering division of the A. I. M. E., brought up this question. The paper was read at the annual dinner of the A. I. M. E. in New York, Feb. 23. The principal menace to the success of vapor phase cracking as a commercial process, in his opinion, lies in the price at which Ethyl fluid may be sold at a profit. He says:

"* * * In the minds of some refinery engineers, commercial success of the chemical dope in question (Ethyl fluid) constitutes a considerable hazard to those proposing to install the vapor phase type of commercial cracking unit. It is quite conceivable that if the cost of such synthetic gasoline remains materially higher than that obtained by the pressure cracking processes, installations of the same might easily be rendered commercially unprofitable at some time in the future if the premium charged for doped gasoline were to be substantially reduced as the result of lower cost of manufacture of the dope, consequent upon the larger quantities which will undoubtedly be manufactured as the use of the dope becomes more general."

This is an interesting possibility but it is not sufficiently threatening to prevent many refiners from actively proceeding with the development of vapor phase cracking

Fighting Corrosion in the Refinery

EVERY refiner knows of the exceedingly corrosive character of oil from the west Texas fields, which are producing about 350,000 barrels of crude oil a day and are thought to be capable of producing 750,000. Perhaps all of them do not know, however, that in some of the newer pools discovered during the past few months in west Texas, the sulfur content is even higher than that in the crudes produced in the earlier discovered fields.

This is the fact, according to the statement made by Walter Miller in the paper mentioned above. This adds, of course, to the severity of the problems of refining this crude and its products.

Refiner Organizes Aviation Division

DR. E. R. LEDERER, vice president of Texas Pacific Coal & Oil Co., Fort Worth headquarters, writes that Frank Drew has been appointed manager of the aviation department of that company to develop the sale of Amlo special airplane lubricating oils and to co-operate with airplane engine manufacturers and pilots on all questions of aviation engine lubrication.

The T & P also has bought a Meteorplane, built by the Irwin Aircraft Co., Sacramento, Cal., for experimental purposes. The plane will shortly be flown from California to Fort Worth and will be used in sales promotion of Amlo oils. The company plans to purchase also a large plane of the cabin type, Dr. Lederer says. The new Amlo oil was described on page 22 of the Feb. 8 issue of NATIONAL PETROLEUM NEWS.

Tuttle Is Made Refinery Superintendent

MALCOLM H. TUTTLE has been appointed superintendent of the Destrehan refinery of the Mexican Petroleum Corp., according to word received from company offices. He was formerly chief engineer. F. W. Grey has been appointed assistant superintendent in charge of maintenance and construction with the title of master mechanic. D. I. Maxwell was appointed assistant superintendent in charge of refinery operations. The Destrehan refinery is a topping and asphalt plant with a crude capacity of about 20,000 barrels a day. It is now running about 5,000 barrels a day.

Another Fleming Plant Is Closed Down

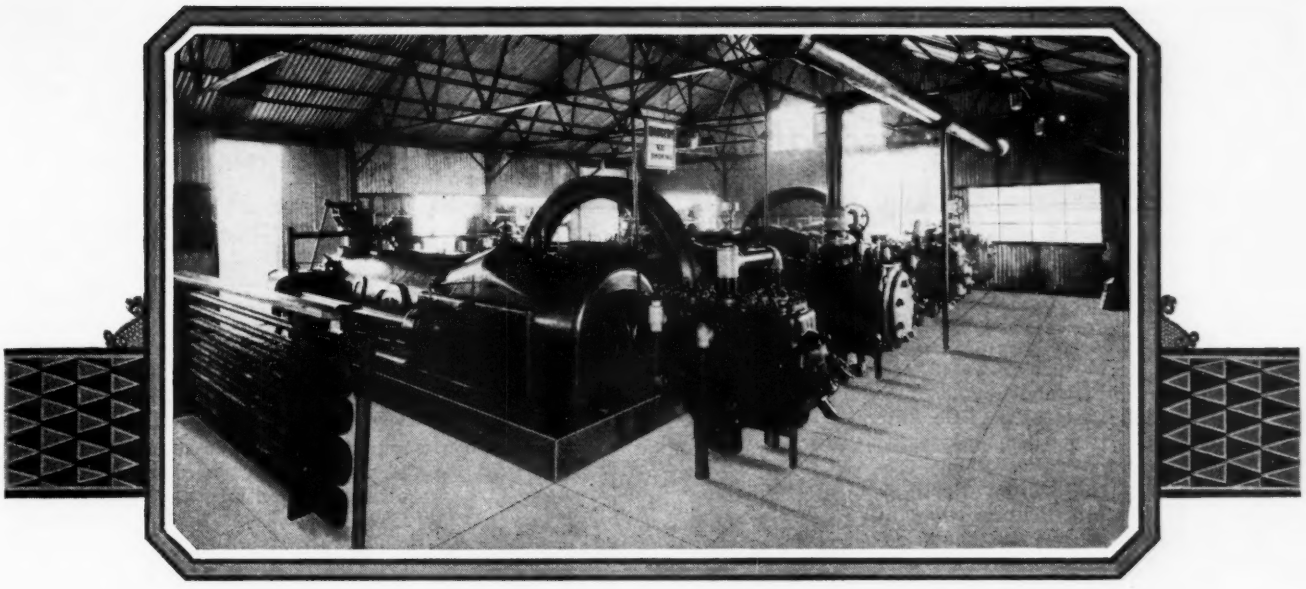
MEETING Charles L. Suhr, president of the Pennzoil Co., unexpectedly the other day in Toronto, he told me that with the starting up of his Dubbs cracking plants, completed not long ago, he had shut down forever his Fleming cracking stills. The Pennzoil Co. was one of several Pennsylvania refiners that installed the Fleming system when it was being handled and built by M. W. Kellogg Co. I believe there is only one Fleming plant operating now and that is at the Marland refinery, Ponca City, Okla. Marland has 18 Fleming units, the largest installation of the process ever made.

The Economy of Cold Condensing Water

REFINERS have always recognized, especially those with plants in the southwest, the value of a cold water supply for their condensers. Many have had to get along with pretty warm water because they did not know the possibilities of atmospheric cooling towers that are available to the refiner nowadays.

Some refiners have found it worth while to spend thousands of dollars in water cooling equipment just to lower the temperature of the cooling water by 5 degrees Fahr. or so, to make possible full condensing of their gasoline streams. If the water is too warm in the summer a good bit of the lightest ends of the refiner's gasoline gets away from him in the form of uncondensed vapor if he has no gas reclaiming plant.

If he has such a plant, its recovery is large and he points with pride to its large yield, if he does not know the facts. If the recovery plant is only doing the job that the condenser ought to do the refiner is kidding himself and operating his recovery plant at an overload.



Power End Clark "4"

CLARK "4" COMPRESSOR

for 100% Continuous 24-Hour Operation

The CLARK 4-Cycle Direct Driven Compressor is designed and manufactured to furnish the industry with compressor equipment of the highest possible dependability and economy when continuous operation is desired.

Among the features which contribute to the remarkable endurance and economy of the CLARK "4" are:

Heavy construction throughout—unusually rugged frame, bearings and valve gear—great overload capacity.

12" Crank Shaft through bearings—no spring when engine is well loaded—no danger of overheating.

Automatic or mechanical forced lubrication to all important points.

Oil-tight Dividing Wall between crank case and power cylinder—no smoke nuisance—no burnt carbon in bearing oil.

Cylinder Jacket separate from bed—repair or replacement simple and inexpensive.

7" Inlet and Exhaust Valves—Ball Point Push Rods—no offset levers in Valve Gear.

Offered in Single and Twin-cylinder types, 100 and 200 brake horsepower, respectively. Our engineers will gladly furnish complete data on the CLARK "4". Clark Bros. Company, Olean, N. Y. Mid-Continent branch and warehouse at 125 W. First St., Tulsa, Okla. Other warehouses at McCamey and Sweetwater, Texas and Artesia, N. M. Also Smith, Booth, Usher Company, 228 S. Central Ave., Los Angeles, and 50 Fremont St., San Francisco.

Clark Bros. Co. OLEAN N.Y.

CLARK

Our Industry — A Page of Facts and Personalities

National Petroleum News

By Paul Wagner

Edgar B. Davis, who discovered the Luling field, produced several million dollars worth of crude from it and then sold oil rights above 3000 feet to the Magnolia Petroleum Co. for approximately $12,000,000, possesses dauntless courage. Davis, as majority owner of the United North & South Oil Co., is still drilling away in schist at 7091 and 7512 feet, respectively, in the No. 2 Tiller and No. 1 Kelley tests on the northwest side of the Luling field.

Drilling progress in the last 10 months totals about 940 feet in the Tiller test and 650 feet in the Kelley. Top of the schist was found at about 4700 feet in both tests and drilling from that depth has all been in schist.

Work on the two wells has been under way nearly three and a half years at a cost estimated at $1,000,000. It has been unusual to make more than two or three feet of hole a day since penetrating the schist formation.

* * *

A recent census of former Tampico oil men now living in San Antonio includes:

Sam L. Kone, formerly of the International Petroleum Co., who now owns extensive interests in Brown and Coleman counties, Texas;

"Rox" Underwood, who with his partner, A. L. Ballard, promoted the gas line built from the Laredo district through the lower Rio Grande valley to Brownsville;

N. S. Von Phul, who now plans operations in west Texas;

H. S. Jones of the Pantepec Petroleum Co. (Buckley interests), who is associated with Ed Buckley in west Texas operations conducted from Fort Worth;

Ed Price, who now operates in Brown, Coleman and Runnels counties, Texas;

Theodore Hicks, also active in west Texas leasing and development;

Luke Gillum, drilling contractor and individual operator, widely known in the South country fields;

W. L. Stevens, formerly Tampico manager of the New England Fuel Oil Co., Magnolia subsidiary, who is associated with Harry Reynolds in Winkler county, Texas, operations;

Jess Woollett and Walter Arnold, now active in Texas and New Mexico;

Theo Rivers, formerly treasurer of the Texas Co. of Mexico, S. A.;

A. McNab and C. Lucy, formerly identified, respectively, with "El Aguila" and The Texas Co. affairs.

JOHN H. LANGSTON

John H. Langston, chief scout, Sun Oil Co., Dallas, and secretary-treasurer of the National Oil Scouts Association of America, is widely known among the younger group of oil men in the southwest.

Mr. Langston succeeded to his present position after the resignation several years ago of R. E. ("Bob") Harris, who became identified with the sales organization of the Guiberson Corp. Prior to that time, Mr. Langston had been Mr. Harris' assistant.

Before locating in Dallas Mr. Langston was with the Carter Oil Co., at Tulsa, at the time J. Edgar Pew, now vice president and general manager of the Sun's producing activities, was the Mid-Continent head of the Carter.

* * *

Woodley Petroleum Co., which has opened west Texas offices at Midland, placed E. M. Funkhouser, geologist, in charge. The company, of which E. L. Woodley of Shreveport is president, is a Delaware corporation incorporated in 1922. General offices are at Shreveport.

* * *

A. V. Bland, familiarly known to his friends as "Ace," is now Gulf Coastal representative of the Dunn Manufacturing Co., Oxnard, Cal., with Houston headquarters. Mr. Bland formerly was with the Oil Well Supply Co., at El Dorado, Ark.

Dr. H. S. Thompson has become chief surgeon of the Standard Oil Co. of California, at San Francisco, succeeding Dr. L. P. Howe, who recently resigned. Dr. Thompson was chief surgeon at the Royat, France, base hospital in the World war.

* * *

When the Democratic National Convention meets in Houston, June 26, the oil field settlement of Iraan, Pecos county, expects to be represented. G. D. O'Quinn, secretary of its chamber of commerce, is advising the world that a whistling orchestra of twenty members recruited in the Yates field will be on hand for the announced purpose of whistling Jesse H. Jones, Houston capitalist, into the vice presidential nomination. Says O'Quinn:

"Texas, the largest state in the Union, has the largest oil fields in the world and along with its many other qualifications of greatness it should have the vice president; and if whistling will put him there—'nough said, we'll whistle."

* * *

W. H. Elliott is now assistant auditor of operations of The Texas Co., refinery department, with Houston headquarters. He formerly was third assistant general superintendent at the Port Arthur works, where he has been succeeded by A. S. Patrick. C. D. Norris replaces Mr. Patrick as chief engineer at Port Arthur. John Carlstrom succeeds Mr. Norris as assistant chief engineer.

* * *

A. I. Levorsen is chief geologist of the Independent Oil & Gas Co., Tulsa, following acquisition several months ago of the Philmack Co., by the Independent. Mr. Levorsen formerly was chief geologist of the Philmack.

* * *

R. E. Bishop, sales manager of the Crystal Oil Refining Corp., has returned to Shreveport headquarters after a short business trip to Houston.

* * *

C. R. Smith, formerly with the Mexican Eagle Oil Co., Ltd., (El Aguila) in the Tampico district, has been transferred to the Isthmus of Tehuantepec region. He will make headquarters at Minatitlan.

* * *

Walter B. Pyron, vice president of Gulf Production Co., is back at Houston headquarters after a trip through the west Texas territory.

* * *

R. E. Hutchison is now chief clerk in the Seminole field office of The Texas Co., relieving R. R. Kirkpatrick, who goes to Tulsa. Mr. Hutchison was formerly in the tankage department.

Serving the Industry with SPEED

HUGHES SELF-CLEANING CONES

Speed in getting the hole down is essential to Drilling Economy.

Since the inception of Hughes "Self-Cleaning" Cones, Operators and Contractors in the Rotary fields throughout the world have been able to cut their drilling costs per well a worthwhile extent.

"Sold by Supply Stores Everywhere"

HUGHES TOOL COMPANY

Service Plants
Los Angeles, Calif.
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Houston, Texas

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Woolworth Bldg.
New York City

GULF
Refining
Company

General Sales Offices
PITTSBURGH, PA.

District Sales Offices
New York, Houston, Atlanta,
Boston, New Orleans, Tampa,
Philadelphia, Louisville

REFINERS OF OKLAHOMA
TEXAS AND LOUISIANA

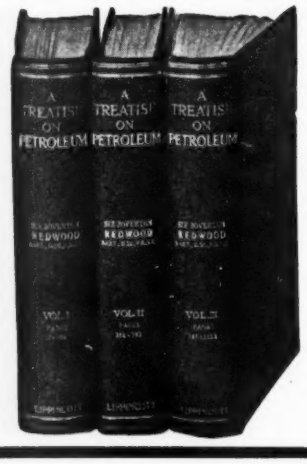
PETROLEUM

REFINED OIL
GASOLINE
NAPHTHA
GAS OILS
PARAFFINE WAX
PETROLEUM COKE

Fuel Oil--Lubricating Oils

CYLINDER ENGINE
CORDAGE

RED AND PALE PARAFFINE OILS



Information on all branches of the petroleum industry is to be found in the 4th edition of A TREATISE ON PETROLEUM by Sir Boverton Redwood.

To obtain this valuable set make your check for $30 payable to

NATIONAL PETROLEUM NEWS
1213 W. 3rd St. Cleveland, Ohio

New A. P. I. Division May Meet in June

NEW YORK, March 7.—That the recently organized division of development and production engineering of the American Petroleum Institute will hold a general meeting, probably the week of June 10, at Colorado Springs, in connection with the general meeting of the standardization committee, was announced here today at the organization meeting of the eastern division of the new branch.

At the Colorado Springs meeting two days will be given to the standardization program, which is now at the point where it needs the cooperation of the engineers in the field in helping educate the field men in the use and care of standardized equipment. Another two days will be given to the work of the production engineering branch direct. The program for this two days' meeting is now being drawn up.

Carl A. Young, general standardization director for the institute, and Frank Brewster, Reclamation Oil Co., Bradford, chairman of the eastern division of the institute branch of production engineering met with men from the various eastern territories at the institute offices today, and planned the further organization of this division.

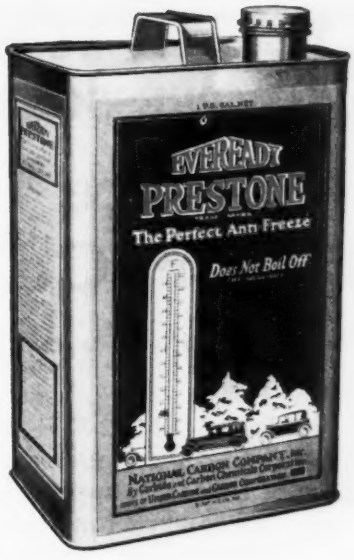
This division plans to meet at Bradford about May 1 for two days, holding meetings one day and making a trip on the second day through fields where water flooding is being carried on to observe the various types of equipment in use.

Other officers of the eastern division who were chosen today were W. J. Brundred, Brundred Oil Corp., Oil City, Pa., vice chairman, and Forest D. Dorn, Forest Oil Corp., Bradford, secretary. Members from the eastern district will be appointed to serve on membership committees and on the general committees of the division of production engineering.

St. Louis Oil Club Elects

ST. LOUIS, March 8.—E. J. Keitel, of the Columbia Oil Co., was elected president of the St. Louis Petroleum Club at the annual meeting Feb. 14. Other officers are A. C. Bauer, A. C. Bauer Oil Co., vice-president; M. G. Boylan, Frier-Sturgies Co., treasurer; R. F. Leinberger, Blackmer Pump Co., secretary; J. G. Brueckmann, Brueckmann Cooperage Co., sergeant-at-arms.

The governing board includes the officers and William Kleissle, J. D. Streett & Co.; D. E. Lavin, Roxana Petroleum Corp.; R. E. Gurley, Gurley Oil Co.; W. E. Espy, Mid-Continent Petroleum Corp.; F. A. King, Metal Hose & Tubing Co.; William Heintz, Heintz Steel & Mfg. Co. The annual inaugural dinner dance was Feb. 25.



As long as cold weather lasts

there is an active market for

The perfect anti-freeze

EVEREADY PRESTONE

Trade-mark

(ETHYLENE GLYCOL)

For the preparation of anti-freeze solutions as covered by U. S. Patent 1213368

EVEREADY Prestone is steadily gaining in popularity. As fast as motorists learn of this safe, permanent, trouble-free protection against winter temperatures, they are discarding ordinary mixtures and solutions, and trusting the safety of their cars to the one perfect anti-freeze—Eveready Prestone. As long as cold weather continues there will be new customers for Eveready Prestone. Be sure you have a stock of Eveready Prestone to supply the continually increasing market for this new Eveready product.

Eveready Prestone, the safest anti-freeze

Eveready Prestone will not boil off and it never deteriorates in use. A car with the proper amount of Eveready Prestone in the radiator is always safe from a freeze-up. There is no alcohol or glycerine in Eveready Prestone. It is a distinct chemical compound. It is harmless and safe to use. No danger of overheating.

Every Eveready Prestone dealer should urge his customers to have the circulating system gone over to be sure of tight joints and freedom from leaks. Then one supply of Eveready Prestone will mean security and peace-of-mind all season for the winter driver. His Eveready Prestone will be an economical long-time investment in insurance against a frozen car.

Be sure you have a supply of Eveready Prestone on hand as long as cold weather lasts, for motorists everywhere are continuing to change to this better protection.

Manufactured for

NATIONAL CARBON COMPANY, INC.

New York — San Francisco

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By CARBIDE AND CARBON CHEMICALS CORPORATION

Units of Union Carbide and Carbon Corporation

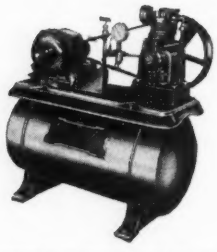
KELLOGG COMPRESSORS

It Sure is A Lot of Air Compressor for the Money!

The KELLOGG EM-52-S is a husky, reliable, 2-cylinder air compressor that will supply all the air necessary for tire filling, spring oiling, engine cleaning, and all the other jobs for which air is used in the modern filling station.

Best of all, it's priced at a figure that means "More for your Money" than you ever before dreamed possible in an air compressor.

The KELLOGG EM-52-S contains features generally found only in much higher priced compressors—look at them!



KELLOGG EM-52-S

2 cylinders
2 ¼" bore by 2" stroke
¾ horsepower motor
32 gallon tank
3.86 cubic ft. of air
Automatic control
Self-cleaning check valve
Patented KELLOGG Pump and Splash Lubricating System
Honed Cylinders
Air cleaner and muffler
Completely equipped

Price $205.60 NET

Kellogg Spring Lubricator Kills Squeaks

A scientifically designed portable air lubricator that can be used on the greasing rack or in the lot. Clean, rapid and economical. Used with KELLOGG Penetrating Graphite Oil, it is exceedingly profitable for the modern service station. A one-man job that permits a complete spring lubrication in five minutes. Tank capacity — 3 gallons — 1 for oil and 2 for air. 25 cars can be serviced on one gallon of oil.

Price

$20.00

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KELLOGG MANUFACTURING CO.
HUMBOLDT STREET ROCHESTER, N.Y.

Do It Now

By BERTON BRALEY

If with pleasure you are viewing any
work a man is doing,
If you like him or you love him,
tell him now!

Don't withhold your approbation till
the parson makes oration
As he lies with snowy lilies on his
brow;

For, no matter how you shout it, he
won't really care about it,
He won't know how many teardrops
you may shed.

If you think some praise is due him,
now's the time to slip it to him,
For he cannot read his tombstone
when he's dead!

More than fame and more than money
is the comment kind and sunny
And the hearty, warm approval of
a friend.

For it gives to life a savor and it
makes you stronger, braver,
And it gives you heart and spirit
to the end;

If he earns your praise—bestow it;
if you like him, let him know it,
Let the words of true encouragement be said;

Do not wait till life is over and he's
underneath the clover,
For he cannot read his tombstone
when he's dead!

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TULSA, March 8.—When Frank Buttram, D. W. Ohern, Irving Perrine, geologists, L. H. Pritchard and the Sunrise Oil Co., represented by S. A. Apple, T. H. Vaughn and P. E. Brittain, all of Oklahoma City, purchased a half interest in the royalty under the J. D. Bowers ranch in Gray county, Texas, they closed the biggest royalty deal every consummated in the Panhandle. The Bowers ranch is the site of the Bowers field and has an average daily production of 8,500 barrels from nine wells, with two gas wells and 11 drilling wells.

The consideration was reported as $1,000,000, of which $250,000 was cash paid immediately and the balance cash and oil. The field is producing the highest gravity oil in the Panhandle, selling at $1.12 a barrel, 37 cents above the posted price for Panhandle crude.

MILWAUKEE, March 8.—The first new model Ford truck in Wisconsin was delivered to the Wadhams Oil Co. here. Through friendly relations with the motor car company the first new modeled truck in the state was delivered to Wadhams. The truck was driven to busy intersections during the first days so many persons could see it.

New Publications

"The Geology of Venezuela and Trinidad," a 552-page book by Ralph Alexander Liddle of the Pure Oil Co.'s staff, is based on studies made by the author from 1920-1925 in the republic of Venezuela and the adjacent West Indian islands of Trinidad, Margarita and Curacao. It is published by J. P. MacGowan, Fort Worth. It is dedicated by the author to Prof. Gilbert D. Harris, long identified with the United States Geological Survey.

Mr. Liddle acknowledges co-operation on the part of many geological authorities and points out especially that the presentation of his work to the public is primarily due to the liberal policy of the Pure Oil Co., which gave access to all its reports on Venezuela and placed at his disposal facilities for completion of the book. Messrs. R. W. McIlvain, J. D. McNutt and Theron Wasson are especially mentioned.

The book, which is profusely illustrated, deals with detailed structural geology in producing fields and includes a systematic arrangement of present knowledge as a background for future studies. Arrangement and influence of ancient land masses, general tectonics and major structural features of the northern part of South America and the Caribbean sea region have been considered, the author points out, in as much detail as is warranted by present knowledge of stratigraphy and regional structure.

Because of important oil developments in Venezuela and Colombia, which promise to be of increasing interest to the world petroleum industry, Mr. Liddle's book fills a wide gap that previously existed in geological literature.

Will Build Six Stations

NEWARK, N. J., March 8.—Peoples Oil Co. of New Jersey, Inc., recently organized to do a wholesale and retail business, will build six filling stations within a few months.

Officers are: J. F. Dyer, formerly secretary and treasurer of the D & L Oil Co., president; and H. C. Ruoff, secretary and treasurer.

GREENSBURG, Kan., March 8.—Winters Oil Co. has just completed a filling station at Haviland, Kan., and will complete a modern filling station here on April 1, according to F. H. Winters, manager.

S. R. Shoup, general sales manager at Los Angeles of the Joseph Reid Gas Engine Co., Oil City, Pa., recently visited the latter city on business.

Get Ready For Spring. Order Now

Peak Sales Just Ahead

IN JUST a few days motorists will be hunting for places in which to buy gasolines and oils. Your heavy spring and summer business is just ahead.

Why not make it easy for them to find your service station by placing these Western Curb Signs where the passing autoist can see them easily.

Low in price, they will practically never wear out. You can have the painting renewed in your own city or do it yourself.

With their heavy base, they are windproof.

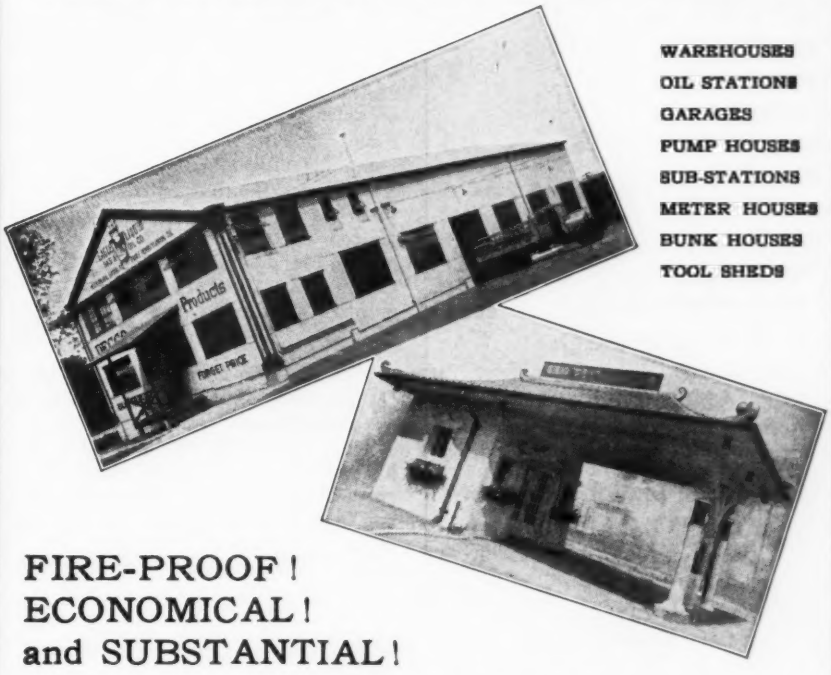
You should have one or more of these signs along the curb and in a conspicuous place on your station grounds.

WRITE FOR ILLUSTRATED BOOKLET AND PRICES

The Western Iron & Foundry Company at Wichita, Kansas

In the heart of the oil fields

STEEL BUILDINGS for EVERY PURPOSE



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ALL sizes and lengths of Triplexd Hose are carried in stock in these cities:

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CLEVELAND: 4336 Broadway
CINCINNATI:
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DETROIT:
5459 Grand River Avenue
ST. LOUIS: 1621 Pine Street
KANSAS CITY:
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CHICAGO:
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METAL HOSE & TUBING CO.
INCORPORATED
236 Tillary Street
BROOKLYN, N.Y.

New Equipment to Improve Plants

Personal Notes of the Manufacturers

National Petroleum News

The International Derrick & Equipment Co., Columbus, O., has added a series of canopies to its derricks in the Samboja field near Balikapapan, Borneo, D. E. I., to protect its drilling crews from the intense heat, sunshine and heavy tropical rains. A roof is built covering the crows nest and the canopies are made with an overhang wide enough to completely shade the interior of the derricks during the heat of the day.

* * *

United States Air Compressor Co., Cleveland, O., has appointed Harry H. Davis factory west coast manager with headquarters at San Francisco where an office and warehouse will be maintained. Mr. Davis has become widely known in the automotive industry and among oil station operators during his connection of several years with the United States Air Compressor Co.

* * *

H. L. Hileman, sales manager of Joseph Reid Gas Engine Co., Oil City, visited the Pittsburgh branch of the company on Jan. 26. He will visit Newark, O., before his return to Oil City.

* * *

J. S. Mellon, sales manager of Dunn Mfg. Co., Oxnard, Calif., accompanied by R. T. Todd, Mid-Continent represensative for the company, has been on an extended trip to the Pacific coast, visiting the home office of the company and making a tour of California oil fields. Previous to his visit to the west coast, Mr. Mellon visited eastern oil districts. He will make his headquarters in the Mid-Continent territory after several months on the west coast.

* * *

The Lincoln Electric Co., Cleveland, O., has appointed A. M. MacFarland as general sales and development engineer. Mr. MacFarland will devote his efforts to the development and special application of automatic carbon arc welding. He has contributed some 30 patents during the past seven years to the development of the welding industry.

* * *

The Linde Air Products Co., 30 E. 42nd St., New York, has issued a booklet on welded piping describing particularly the modern way for installing heating and plumbing systems. How welded pipe lines on hot water jobs, where branches have been taken off mains, give circulation to radiators in homes, for instance, at a lower boiler temperature than when threaded fittings are used throughout, is told in this booklet. Efficiency of the oxywelded joint for oil and gas lines for high pressure steam in industrial plants, is pointed out.

* * *

Portland Cement Association, 33 W. Grand Ave., Chicago, Ill., has off the press a booklet on "Concrete in the Petroleum Industry" which gives data on the making of concrete and the use of Portland cement in the oil field and in refineries. Among the uses of cement in the oil field is described the cementing of oil wells and the lining of storage reservoirs. Fire protection afforded in the refinery by the use of concrete in stills, agitators, treaters, fire walls, filters, etc., is described.

Specifications for concrete suggested by the company for oil refineries and for derrick foundations are included in the book.

* * *

Crouse-Hinds Co., Syracuse, has issued bulletin No. 2107 on "Pipe Hangers, Fixture Hangers, Unions and Connectors" and bulletin No. 2105 on "Floodlighting an Aid to Guards".

* * *

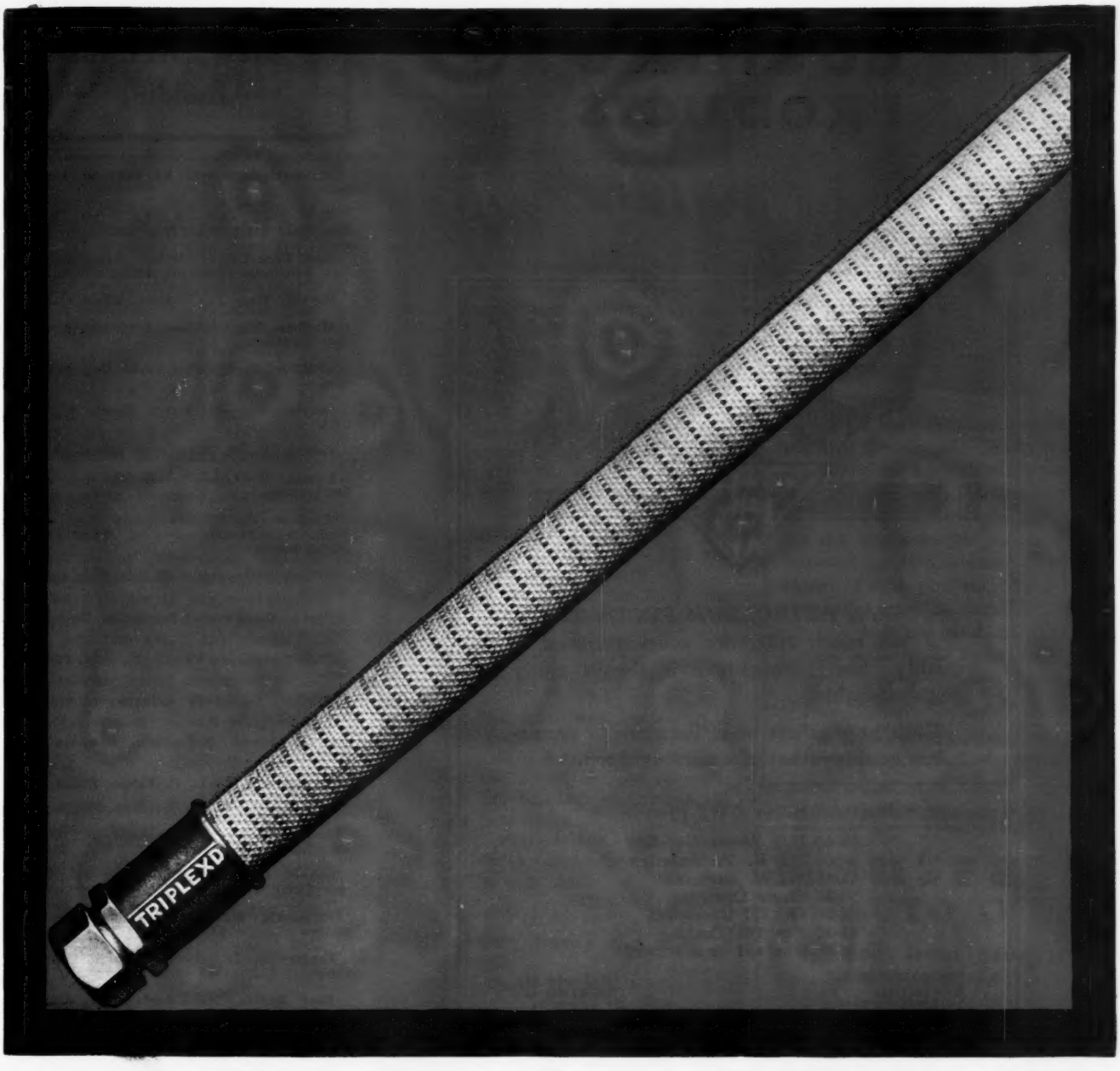
Publication of the 1928-1930 catalogue of electrical supplies of the Westinghouse Electric & Manufacturing Co. has been announced. This catalogue presents the electrical and mechanical features and application information for all supply apparatus and appliances manufactured by the Westinghouse company, and in addition describes and illustrates a representative list of large motor and generating apparatus.

* * *

The United Filters Corp., Hazleton, Pa., has published a bulletin describing the Type O-R Kelly pressure filters, which is being adopted by users of Diesel and other internal combustion engines for re-conditioning crank case oils. Bulletins may be obtained from the company.

* * *

Eason & Therolf Tool Co., Box 59, Los Nietos, Calif., has issued a descriptive pamphlet covering the new all steel self-cleaning valve for slush pumps. This valve requires no rubber inserts and recently a slush pump using this valve was run in California by one of the major companies 80 days without any attention to the valve. The pamphlet will be mailed upon request.



"A Length of Time"

IF YOU specify Triplexd Hose you pay for a "length of hose" but you get a "length of time". Because—

You are now insured for 1000 Days against losses from ordinary wear and tear, accidental breakage, and mishandling in the operation of every pump you own, to which Triplexd Registered Insured Gasoline Hose* is attached.

Write for full details.

METAL HOSE & TUBING CO. INCORPORATED
236 Tillary Street
BROOKLYN, N.Y.

Triplexd Registered Insured Gasoline Hose is any length of Triplexd Filling Station Pump Hose ¾", 1", or 1¼" inside diameter, and not more than 15 feet long, shipped from our Brooklyn Factory on or after June 1, 1927

CUSHING PRODUCTS

Thoroughbreds

DOGS or PETROLEUM PRODUCTS . . . not much difference when it comes to quality, the thoroughbred is always easily distinguishable.

Cushing products bear this mark of unmistaken quality—that of a thoroughbred.

A wire or letter will bring quotations.

58-60 U.S. Motor Gasoline
64-66-375 E. P. Aviation
41-43 W. W. Kerosene
36-38 Straw Distillate
32-36 Gas Oil Uncracked
22-26 Fuel Oil (Cushing
24-26 Fuel Oil or Blackwell)

PRODUCING
REFINING
TRANSPORTING
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Refineries at:
CUSHING and
BLACKWELL,
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CUSHING REFINING AND GASOLINE CO.
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Accurate—Compact—Convenient

The experience of 39 years has made the form of the Allison Coupon Book simple, practical and dependable. Progressive, wide-awake filling stations are exclusive users. Every book guaranteed to be absolutely accurate. Furnished in stock or special designs. *Send for samples and prices.*

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Coupon Book Specialists Since 1888

New Stations Building

These stations will be built or are being built:

New York City.—M. T. Watts, Roosevelt Ave. near 114th St., filling station.

New York City.—Elizabeth Bradshaw, Roosevelt Ave. near 120th St., filling station.

Merrill, Wis.—Joe Doheny, filling station.

Madison, Wis.—Roxana Petroleum Corp., filling station.

Glendive, Mont.—The Texas Co., filling station.

Sparta, Wis.—W. Grant Smith, filling station.

Canton, O.—P. R. Burrill, filling station.

Lorain, O.—Cities Service Oil Co., two filling stations.

Wellston, O.—Hickory Realty Corp., of New York, with branch office at Wilmington, O., filling station.

Columbus, O.—James E. Hite, bulk and filling station.

Dover, O.—Roxana Petroleum Corp., filling station.

Parkersburg, W. Va.—C. F. Mehl, filling station.

Delphos, O.—Frank Reinemeyer, filling station.

Grand Island, Neb.—John Claussen, filling station.

Portsmouth, O.—L. C. Payne, filling station.

Rushville, O.—C. R. Bradford, filling station.

Ashtabula, O.—The Pennzoil Co., Oil City, Pa., bulk station.

Geneva, O.—The Pennzoil Co., Oil City, Pa., two filling stations.

Plymouth, Mass.—Adolph Schreiber, filling station.

Centerville, Ia.—Harlan Adams, filling station.

Rock Rapids, Ia.—John Grimm, filling station.

Adel, Ia.—H. V. Ramsey, filling station.

Minneapolis, Minn.—T. E. Johnson, 5516 Lyndale Ave., filling station.

Garretson, S. D.—Myrseth & Eitreim, filling station.

Peekskill, N. Y.—L. B. Co., headed by Louis Berkowitz, filling station.

RICHMOND, Va., March 8.—The finance committee of the Virginia senate has reported the bill increasing the gasoline tax from 4½ to 5 cents a gallon. This action was taken over the protest of oil companies, who opposed the provision of the bill requiring dealers to report prices to the governor. It was claimed before the finance committee that the price-report provisions of the gas tax bill invaded the constitutional guarantee as to privacy in business. Senator Noell told the committee that there would be no more invasion of privacy than the present situation where the state inspects the accounts and other papers of merchants.

ON THE LAZY BENCH

National Petroleum News

Sandy Junior—"Ye promised to gie me saxpence if I was top boy at school. I've been top boy for two weeks running."

Sandy Senior (reluctantly)—"Well, here's a shilling, but ye must give up studying so hard—it's not good for ye."

—Magnolia Oil News.

* * *

"What kind of cigars do you smoke?"

"Ah smokes Robinson Crusoes."

"What kind is them?"

"Castaways, dumbell, castaways!"

—Magnolia Oil News.

* * *

A little boy was told that when visitors came to the house it was his duty to pay them some attention.

Shortly afterward a Mrs. Daniel called, and the small boy shook hands with her politely and exclaimed in his best drawing-room manner:

"How do you do, Mrs. Daniel? I've just been reading about your husband in the den of lions."

—Magnolia Oil News.

* * *

A man traveling to New York by automobile, being near the State line between Virginia and North Carolina, wished to know exactly whether he had crossed.

Seeing a negro girl on the side of the road, he called out:

"Say, is this Virginia?"

She replied, "No, sah; this here's Lucy."

—The Diamond.

* * *

"I guess I've lost another pupil," said the professor, as his glass eye rolled down the kitchen sink.

—Magnolia Oil News.

* * *

It was married man's night and the minister had asked that everyone who had domestic worries stand up.

"Ah!" exclaimed the minister, peering at the lone man who had remained seated, "you are one in a million."

"It ain't that," piped the voice as the rest of the congregation gazed at him suspiciously, "I can't get up. I'm paralyzed."

—Magnolia Oil News.

* * *

"Are you a college man?"

"No. I'm wearing these clothes to pay an election bet."

—Stanolind Record.

* * *

There's always something. The better your brakes, the greater the danger to your rear fenders.

—The Diamond.

A man who had been living a life that was, to put it mildly, a little irregular, wanted to have his life insured, and applied for a policy. The agent sent the company's doctor to examine the applicant, and that was the last he heard of it for a time. Meeting his friend on the street, he said: "Say, George, how about that life insurance policy of mine? Do I get it?"

"Well," said the agent, "you know, in our company it is the custom of the doctor, after he examines a man, to take a chart of the human body, and he punches a hole in it wherever he finds anything wrong."

"Oh, is that so, George? Did the doctor do that in my case?"

"He sure did, and he took the chart home and played it on his player piano, and it played 'Nearer My God to Thee.'"

—Magnolia Oil News.

* * *

A very fat man was seated in a street car taking up half the room of the very thin man next to him.

"I think the street car people ought to charge by weight," exclaimed the thin man, petulantly.

"Indeed," replied the portly one. "Then in that case they wouldn't stop to pick you up."

—Stanolind Record.

* * *

"Oh, mother, there's a murder in the basement!"

"Foolish child! What makes you think so?"

"I just heard the gardner tell the butler, 'We might as well kill the other one.'"

—Magnolia Oil News.

* * *

A bricklayer said to a foreman on a job: "I'd like to work here, but I can't find a place to park my car."

The foreman replied: "I guess you won't do. This is a high-class job and we want only bricklayers who have chauffeurs."

—Oakland Ad Club.

* * *

No rug on the floor—happy. Hundred dollar rug on the floor—dissatisfied. Five hundred dollar rug on the floor—jealous of the Joneses. Thousand dollar rug on the floor—five hundred dollars in debt.

—Magnolia Oil News.

* * *

Merchant: "Before I can engage you, you will have to pass an intelligence test."

Girl Candidate: "Intelligence test? Why, the advertisement said you wanted a stenographer."

—Skelly News.

Heavy Duty Folio

$17.35

367—The best constructed folio we have developed. Made from the best 6-oz. smooth black cowhide. Comfortable handles made to carry all the weight, relieving the strain on the seams. Reinforced bottom protected with studs. Three pockets. Two inner cases may be carried.

Less 10% for Cash

Other styles in our FREE Catalog

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Builders of Sales Luggage

614 Delaware, KANSAS CITY, MO.

Neutrals for AUTO OILS!

Refined from genuine Kentucky crude.

PARAFFINE BASE.

Filtered through Fuller's Earth.

Wax pressed out.

Excellent for turbine and motor oil compounding.

Our fleet of 75 tank cars assures prompt service.

Assorted cars our specialty.

Whatever you want—a can or a carload—*be sure to get our prices!*

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REFINING COMPANY

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Cable Address: STOLOIL, LOUISVILLE

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OPALINE

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If you sell a motorist Opaline, you are selling not only a good quality motor oil but you are selling *precision* in lubrication.... When a motorist drives in for motor oil you ask him his *mileage*, then you consult the Sinclair Recommendation Index and give him the grade of Opaline which fits the degree of wear in his engine and seals the power in his cylinders. That is the *extra* service Opaline gives a motorist —that is the *extra* reason why a motorist should buy Opaline and why you should sell it. It builds sound business because it gives complete satisfaction. May we tell you the details concerning this common sense method of selling Opaline Motor Oil, exclusive with Authorized Opaline Dealers?

SINCLAIR REFINING COMPANY, INC.

Also Makers of Sinclair Gasoline and H-C Gasoline

45 NASSAU STREET, NEW YORK

Atlanta Boston Chicago Houston Kansas City

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Refinery - Tank Wagon Markets

National Petroleum News

Mid-Continent Gasoline and Kerosene Are in Active Demand

Staff Special
TULSA, March 10

THE Mid-Continent refinery market has experienced another exceptionally good week, with shipments of all major commodities as good or better than normally expected at this season. As a result, refiners throughout the entire area are almost unanimous in declaring their position with reference to stocks on hand is better than it has been at any time this year.

Lower gravity gasolines and kerosenes led the lists this week in the gradual move to higher ground. While domestic demand for the higher gravities was somewhat lighter, exporters bought sufficient quantities in various fields to more than take up any slack which otherwise would have occurred in the small letup in domestic orders.

Three export companies were in the market in north Texas and at least two made inquiries in Oklahoma and Kansas this week. Purchases estimated at close to 3,000,000 gallons of 64-66, 390 e.p. and 64-66, 375 e.p. gasolines were made in north Texas. Prices were reported at 6.50 cents a gallon for the 390 end point goods, and 6.75 cents a gallon for the 375 e.p. gasoline.

Late in the week, however, one of the export companies announced that it had withdrawn temporarily from the market, but the other two were still comparatively active. The Oklahoma representative of one of the companies still in the market was understood to have authority to make a purchase in Group 3, but the price offered in this territory was generally considered too low in view of the fact that a majority of refiners making high gravity gasolines are still moving the bulk of their 64-66, 375 e.p. gasoline production to the domestic trade at prices ranging from 6.875 to 7.25 cents a gallon.

One export company on the afternoon of March 3 and the morning of March 5 bought around 500,000 gallons of 41-43 prime white kerosene in north Texas at 4 cents a gallon. Another export company inquired among the Texas and Oklahoma refiners for a similar amount of the same quality of goods at 4 cents a gallon but was reported unable to place any orders.

While the Standard Oil Co. of New Jersey's advance of .25 cent a gallon on gasoline in cases this week had no immediate effect on bulk gasoline prices at the Gulf, the trade in the Mid-Continent accepted the advance as an indication of a better market on bulk goods in the near future. A few refiners in north Texas have been booking just enough gasolines for export at offered prices to keep their stocks from accumulating, but have been extremely reluctant to accept orders for any large quantities for period shipment at the present price level.

PURCHASE late last week and early this week of 250 to 300 cars of 58-60 U. S. Motor gasoline by the Gulf Refining Co. from north Texas refiners for March delivery caused a scarcity of this grade of gasoline for spot shipment in the area normally served by north Texas plants.

The Gulf Refining Co. during the last week of February and the first week of March was reported to have bought close to 450 cars of U. S. Motor gasoline for shipment to its retail stations. This is the second time this year the Gulf Refining Co. has made heavy purchases of U. S. Motor gasoline in north Texas, Louisiana and Arkansas.

Domestic demand for 58-60 U. S. Motor, 60-62, 437 e.p. and 60-62, 400 e.p. gasolines continued to be good in other areas of the Mid-Continent. In Oklahoma, spot sales to jobbers by refiners representing 83 per cent of the crude capacity of the state selling on the spot market were not quite as good for the period of March 3 to 9 inclusive as they were for the period of Feb. 25 to March 2 inclusive, yet sales for the first eight business days of March were considerably better than for the last eight days of February.

Refiners reporting spot sales daily to NATIONAL PETROLEUM NEWS and Platt's Oilgram sold a total of 564 cars of 58-60 U. S. Motor gasoline during the period of March 1 to 9 inclusive. Sales for the last eight days of February totaled 295 cars, the increase for the March period being 91.2 per cent. Sales by the same refiners for the first eight days of February totaled 374 cars as compared with the 564 cars for the same period in March, the increase being 50.8 per cent.

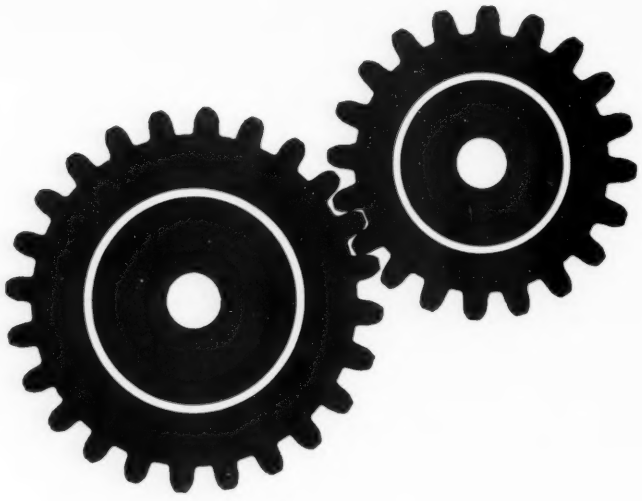
Demand for 60-62, 437 e.p. gasoline has been comparatively steady during these periods. For the first eight days of February a total of 193 cars of 60-62, 437 e.p. gasoline were sold, as compared with 200 cars for the first eight days of March, the March business representing an increase of 3.6 per cent. Comparing the last eight days of February when 188 cars of 60-62, 437 e.p. gasoline was sold, the increase in the first eight days of March was 6.4 per cent.

An increase of 60 per cent was shown on 60-62, 400 e.p. gasoline for the first eight days of March when 104 cars were sold, as compared with the first eight days of February when 65 cars were sold. The increase was 100 per cent in the March period over the last eight days in February when 52 cars were sold.

It might be interesting to note that with a total of 984 cars of 58-60 U. S. Motor gasoline sold on the spot market to jobbers during February, the total sales for the first eight business days of March represent 57.3 per cent of the February total, with two-thirds of the month still to go.

NATURAL gasolines were unable to rally during the week from the slump into which they slipped when the expected first of the month buying was absent. Manufacturers for the most part were agreed late in the week that while there were a sufficient number of small sized orders to prevent any quantity of goods being dumped on the market, considerable large buying would be neces-

(*Continued on Page* 172)



Are these gears working for *you?*

If not, there's a leak in your business—you're losing profits every day! ¶ *23,000,000* cars and trucks need transmission and differential lubricant! ¶ Are you getting your share of this profitable business? Staso provides the way. Exclusive territory to recognized jobbers.

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TRANSMISSION AND DIFFERENTIAL
STASO
LUBRICATION SERVICE

Refinery Markets on Light Oils and Lubricants

Prices given below are in cents per gallon, F. O. B. refinery, except where $ is shown

(These Refinery Prices compiled in the OIL PRICE HANDBOOK for a whole year)

GASOLINE AND NAPHTHA

	Prices Mar. 12	Prices Mar. 5	Prices Feb. 27
PENNSYLVANIA			
52-54 Naphtha	7.625– 8.50	7.375– 8.25	7.75 – 8.00
54-56 Naphtha	7.75 – 8.50	7.75 – 8.25	7.75 – 8.00
58-60 U.S. Motor 437 e.p.	8.00 – 8.25	8.00 – 8.25	7.75 – 8.00
60-62 400-410 e.p. gasoline	9.00 – 9.50	8.75 – 9.50	8.25 – 9.00
64-66 390 e.p. gasoline	9.25 – 9.75	9.125– 9.75	9.00 – 9.50
68-70 Str.-run gas. 350-360 e.p.	10.25 –10.875	10.25 –10.875	10.00 –10.50
OKLAHOMA			
48-50 450 e.p. naphtha	†5.75	†5.50 – 5.75	†5.50
50-52 450 e.p. naphtha	†5.75	†5.50 – 5.75	†5.50
56-58 450 e.p. gasoline	**5.875– 6.00	**5.75	**5.75
58-60 450 e.p. gasoline	**6.00	**5.75 – 6.00	**5.75 – 6.00
64-66 390 e.p. gasoline	6.50 – 6.75	6.50 – 6.75	6.50 – 6.75
68-70 350-360 e.p. gasoline	7.00 – 7.25	7.00 – 7.25	7.00 – 7.25
OKLAHOMA (Weighted Average Prices)			
58-60 U. S. Motor, 437 e.p.	6.2643	6.2233	6.1747
60-62 437 e.p. gasoline	6.6176	6.5815	6.5517
60-62 400 e.p. gasoline	6.6667	6 6764	6.7045
64-66 375 e.p. gasoline	7.2500	7.1250	7.1041

Above are weighted average prices, current week's prices being effective on Saturday, instead of Monday, the last day on which weighted averages are available for publication in this table. Weighted average prices for the current Monday are published on page 37 of this issue. The two previous week's prices shown are corrected to show Monday's prices, effective on the dates shown at the top of the columns.

KANSAS* (F. O. B. refinery Kansas destination)			
58-60 U.S. Motor 437 e.p.	6.375– 6.50	6.375– 6.50	6.375– 6.50
60-62 400 e.p. gasoline	6.75	6.75	6.75
64-66 375 e.p. gasoline	7.375	7.375	7.375
NORTH TEXAS			
48-52 450 e.p. naphtha	†5.75	†5.50 – 5.75	†5.50 – 5.75
56-58 450 e.p. gasoline	†5.75 – 5.875	†5.75	†5.75
58-60 450 e.p. gasoline	†5.875	†5.75 – 5.875	†5.75 – 5.875
58-60 U.S. Motor 437 e.p.	†6.00 – 6.25	†6.00 – 6.25	†6.00 – 6.25
60-62 400 e.p. gasoline	6.25 – 6.375	6.25 – 6.375	6.25 – 6.375
64-66 390 e.p. gasoline	6.50	6.375– 6.50	6.375– 6.50
64-66 375 e.p. gasoline	6.75 – 6.875	6.75	6.75
68-70 350-360 e.p. gasoline	7.125– 7.25	7.125– 7.25	7.125– 7.25
NORTH LOUISIANA (N. La., Ark. and Miss. destination)			
58-60 U.S. Motor gasoline	6.50	6.50	6.375– 6.50
ARKANSAS (Arkansas destination only)			
56-58 450 e.p. gasoline	6.25	6.25	6.25
58-60 450 e.p. gasoline	6.25	6.25	6.25
58-60 U.S. Motor 437 e.p.	6.50	6.50	6.50
CALIFORNIA			
*54-58 U.S. Motor 437 e.p.	7.00 – 8.50	7.50 – 8.50	7.50 – 8.50
*58-60 U.S. Motor 437 e.p.	8.25 –10.00	8.25 –10.00	8.25 –10.00
*42-45 Eng. dis. 445-480 e.p.	6.50 – 7.00	6.50 – 7.00	6.50 – 7.00

*2c tax to be added if used in state.

NATURAL GASOLINE

(Note: End point of all grades, not over 375 F. Since Oct. 1, 1927 all naturals must pass corrosion test.)

OKLAHOMA			
Grade AA, 80-87.9, 90% Recovery	†4.875– 5.00	†5.00 – 5.125	†5.50
Grade A, 72-79.9, 90% Recovery	†5.00 – 5.25	†5.25 – 5.375	†5.50 – 5.625
Grade BB, 84-92, 85% Recovery	†4.00 – 4.25	†4.125– 4.25	†4.25 – 4.50
Grade B, 76-83.9, 85% Recovery	†4.00 – 4.25	†4.25 – 4.375	†4.50
Grade C, 80-90, 78% Recovery	†3.75 – 3.875	†4.00	†4.25
NORTH TEXAS (F. O. B. Breckenridge)			
Grade AA, 80-87.9, 90% Recovery	†5.00 – 5.125	†5.25 – 5.375	†5.50 – 5.625
Grade A, 72-79.9, 90% Recovery	†5.00 – 5.125	†5.25 – 5.375	†5.50 – 5.625
Grade BB, 84-92, 85% Recovery	†4.125	†4.25 – 4.375	†4.375– 4.625
Grade B, 76-83.9, 85% Recovery	†4.125	†4.375– 4.50	†4.375– 4.625
Grade C, 80-90, 78% Recovery	†3.875	†4.125– 4.25	†4.25
NORTH LOUISIANA (F. O. B. Monroe District)			
Grade AA	†5.50	†5.75	†5.75
Grade BB	†4.50	†4.75	†4.75 – 5.00
Grade C	†4.375– 4.50	†4.50 – 4.625	†4.50 – 4.625
CALIFORNIA			
75-85, 375-390 e.p. blend	8.00 – 8.50	8.00 – 8.50	8.00 – 8.50

MOTOR FUEL BLENDS

PENNSYLVANIA			
68-70 Blend 437 e.p.	Prices	.....	.....
64-66 Blend 437 e.p.	temporarily	.....	.....
60-62 Blend 437 e.p.	discontinued	.....	.....
OKLAHOMA			
64-66 Blend 437 e.p.	†5.75 – 6.00	†5.75 – 6.00	†5.75 – 6.00

BURNING OILS

PENNSYLVANIA			
45 w.w. kerosene	6.125– 6.375	6.125– 6.50	6.25 – 6.50
46 w.w. kerosene	6.50 – 6.75	6.625– 6.75	6.50 – 6.75
47 w.w. kerosene	6.75 – 7.00	7.00 – 7.25	7.00 – 7.25
300 mineral seal	7.25	7.25 – 7.50	7.25 – 7.50
OKLAHOMA			
41-43 w.w. kerosene	4.25 – 4.50	4.25	4.125– 4.25
42-44 w.w. kerosene	4.75	4.625	4.50 – 4.625
KANSAS (F. O. B. refinery Kansas destination)			
41-43 w.w. kerosene	4.75 – 5.00	4.75 – 5.00	4.75 – 5.00
42-44 w.w. kerosene	5.50 – 5.625	5.50 – 5.625	5.50 – 5.625
NORTH TEXAS			
40-42 w.w. kerosene	†4.125– 4.25	†4.125	†4.125
41-43 w.w. kerosene	†4.375	†4.375	†4.375
NORTH LOUISIANA (N. La., Ark. and Miss. destination)			
41-43 w.w. kerosene	4.75	4.75	4.75 – 5.00
ARKANSAS (Arkansas destination only)			
42-44 kerosene	4.75 – 5.00	4.75 – 5.00	4.75 – 5.00
CALIFORNIA			
38-40 w.w. kerosene	5.00 – 5.50	5.00 – 5.50	5.00 – 5.50

NEUTRAL OIL

Vis.	Color	Prices Mar. 12	Prices Mar. 5	Prices Feb. 27
PENNSYLVANIA		(Viscosity at 70°F.)		
200	No. 3 Assoc. Filt.	33.00 –34.00	33.00 –34.00	33.00 –34.00
180	No. 3 Assoc. Filt.	30.00 –32.00	30.00 –32.00	30.00 –32.00
150	No. 3 Assoc. Filt.	27.00 –28.00	27.00 –27.50	27.00
		(Non Viscous)		
34 Grav. 330-340 Flash		7.50 – 8.00	7.50 – 8.00	7.25 – 7.75
36 Min. Neut. 300-305 Flash		6.50 – 7.50	6.50 – 7.50	6.50 – 7.00
OKLAHOMA				
Vis.	Color	(Viscosity at 100°F.)		
100	No. 2	6.00 – 6.50	6.00 – 6.50	6.00 – 6.50
150	No. 3	8.00 – 8.50	8.00 – 8.50	8.00 – 8.50
150	No. 4	8.00 – 8.50	8.00 – 8.50	8.00 – 8.50
180	No. 3	9.00 –10.00	9.00 –10.00	9.00 –10.00
180	No. 4	9.50 – 9.75	9.50 – 9.75	9.50 – 9.75
180	No. 5	9.25 – 9.75	9.25 – 9.75	9.25 – 9.75
200	No. 3	9.50 –11.00	9.50 –11.00	9.50 –11.00
200	No. 4	9.50 –10.75	9.50 –10.75	9.50 –10.75
200	No. 5	8.50 –10.50	8.50 –10.50	8.50 –10.50
220	No. 3	12.50 –13.50	12.50 –13.50	12.50 –13.50
220	No. 4	12.25 –12.50	12.25 –12.50	12.25 –12.50
220	No. 5	11.50 –12.00	11.50 –12.00	11.50 –12.00
240	No. 3	13.50 –14.00	13.50 –14.00	13.50 –14.00
240	No. 4	13.25 –13.50	13.25 –13.50	13.25 –13.50
240	No. 5	12.00 –13.00	12.00 –13.00	12.00 –13.00
280	No. 3	15.50 –16.50	15.50 –16.50	15.50 –16.50
280	No. 4	15.25	15.25	15.25
280	No. 5	14.00 –15.00	14.00 –15.00	14.00 –15.00
300	No. 5-6	17.00	17.00	17.00
GULF COASTAL				
Vis.	Color	(Viscosity at 100°F., pour test 0)		
100	No. 2 Unfilt. Pale	7.00 – 7.50	7.00 – 7.50	6.75 – 7.25
200	No. 3 Unfilt. Pale	9.50 –10.25	9.50 –10.25	9.25 –10.00
300	No. 3 Unfilt. Pale	10.50 –11.25	10.50 –11.25	10.25 –11.00
500	No. 3½ Unfilt. Pale	12.50 –13.25	12.50 –13.25	11.25 –12.00
750	No. 4 Unfilt. Pale	14.50 –15.50	14.50 –15.50	13.25 –14.00
200	No. 5½ Red Oil	7.50 – 8.25	7.50 – 8.25	7.25 – 8.00
300	No. 5½ Red Oil	8.75 – 9.25	8.75 – 9.25	8.25 – 9.00
500	No. 6 Red Oil	10.00 –10.50	10.00 –10.50	9.75 –10.50
750	No. 6 Red Oil	12.75 –13.50	12.75 –13.50	12.25 –13.00
CALIFORNIA				
Vis.	Color	(Viscosity at 100°F.)		
100	No. 3	9.50 –10.00	9.50 –10.00	9.50 –10.00
200	No. 3	11.50 –12.00	11.50 –12.00	11.50 –12.00
300	No. 3	13.00 –13.50	13.00 –13.50	13.00 –13.50
450	No. 3	15.50 –16.00	15.50 –16.00	15.50 –16.00
550	No. 3	16.50 –17.00	16.50 –17.00	16.50 –17.00
600	No. 3	17.00 –17.50	17.00 –17.50	17.00 –17.50
200	No. 5	11.00 –11.50	11.00 –11.50	11.00 –11.50
300	No. 5	12.00 –12.50	12.00 –12.50	12.00 –12.50
400	No. 5	14.00 –14.50	14.00 –14.50	14.00 –14.50
500	No. 5	15.00 –15.50	15.00 –15.50	15.00 –15.50
600	No. 5	16.00 –16.50	16.00 –16.50	16.00 –16.50
700	No. 7	18.00 –18.50	18.00 –18.50	18.00 –18.50

CYLINDER STOCKS

****OKLAHOMA**			
190-200 Vis. at 210° Brt. St.	31.00 –32.00	31.00 –32.00	31.00 –32.00
150-160 Vis. at 210° Brt. St.	21.00 –24.00	22.00 –25.00	22.00 –25.00
600 E St. 140-150 Vis.-210°	17.00 –18.00	17.00 –18.00	17.00 –18.00
600 St. Ref. Olive Green	8.50 –10.00	8.50 –10.00	8.50 –10.00
600 St. Ref. Dark Green	6.50 – 8.00	6.75 – 8.00	6.75 – 8.00
Black Oil	5.00	5.00	5.00
PENNSYLVANIA		(1-inch Immersion Test)	
600 Steam Refined	9.00 –10.75	9.00 –10.50	9.00 –10.50
650 Steam Refined	11.00 –12.50	11.25 –12.50	11.25 –12.25
600 Flash	16.00 –16.50	16.00 –16.50	16.00 –16.50
625 Flash	25.50 –27.50	25.50 –27.00	26.00 –27.00
600 Warren E	15.50 –16.50	15.50 –16.50	16.50 –17.00
600 Oil City E	15.00 –15.50	15.00 –15.50	15.00 –16.00
600 D Filtered	22.50 –23.00	22.50 –24.00	24.50 –25.50
Cold Test Stock, 40-50 p. p., 140-150 vis. at 210°, 540-550 flash, No. 8 color	26.50 –28.00	27.00 –28.00	28.00 –30.00
40-50 p.p., 140-150 vis. at 210, 540-550 flash, No. 6-6½ color undiluted	24.50 –26.50	25.00 –26.50	26.00 –28.00

(Note—Prices of total immersion test goods average 1 to 3 cents per gallon higher)

†PRICES NOMINAL ††ONLY ONE REFINER QUOTING *QUOTATIONS ONLY **REPRESENTS BOTH SALES AND QUOTATIONS

sary before prices could show any upward trend.

In addition to the export buying of kerosenes mentioned above, domestic demand has been active, although most of the buying has been carried on quietly. Price of 41-43 w.w. grade in Oklahoma at the close of the week was 4.25 to 4.50 cents a gallon, with resale buyers reporting the majority of quotations received by them have been at 4.25 cents, with only odd cars available under this figure. The price of 42-44 w.w. grade has moved up to 4.75 cents a gallon, with goods reported comparatively scarce in most quarters.

The slowness in the fuel oil market noted last week has disappeared and prices were well pegged at present price levels. Buying has continued to be comparatively good all week, and many refiners report they are completely sold up for the entire month. One refiner reported this week that he had quoted 90 cents a barrel on an inquiry for a sizable order of 22-26 gravity fuel oil, admitted that he had no idea whatever of getting the business, and was extremely surprised when he received wire instructions to book the entire order at that price.

Now he says he is going to have to push his plant to get out the order this month.

The present strength of the fuel oils is causing considerable discussion in this territory.

The industrial and railroad buying in Texas has been sufficient to take virtually all the fuel oil off the spot market in that district, but in Oklahoma, the question is somewhat different. The consensus of opinion, however, is that the increased production at the numerous automobile and steel plants has caused the present demand, coupled with the fact that a majority of the railroads which have fuel oils under contract are understood to have been taking out their purchases on time.

Very little fuel oil is reported held in storage now for railroads. One student of the market expressed the belief that the railroads are taking out as much of the fuel as possible at present because they anticipate a crude advance this spring which will react on their contracts, which in most cases are based on the posted price of crude.

Oklahoma neutral oils and cylinder stocks were in slightly better demand this week. Bright stock inquiries also were improved, but prices moved down slightly with one or two companies eager to move an accumulation of goods. One order of 50 cars was reported to have been sold by an Oklahoma company recently at 21 cents a gallon. Other refiners were quoting from 22 to 24.5 cents a gallon.

A majority of refiners making wax report they are well sold up for March. Sales have been made from 3 to 3.25 cents a pound for the 124-126 white crude scale grade.

Committee Find Oil Exchange Is Not Needed

Staff Special
TULSA, March 10

AN ADVERSE report has been made on the establishment of an oil exchange in Tulsa by a committee of the Tulsa chamber of commerce. The committee was appointed several weeks ago after the subject had received considerable local publicity.

The committee appointed to study the question consisted of James H. Gardner, president of the Gardner Petroleum Co.; C. C. Herndon, vice-president of the Skelly Oil Co., and J. H. McBirney, of the National Bank of Commerce.

Establishment of an exchange to deal in crude oil in the manner of organized commodity markets would require a revolution in the methods of buying, selling, storing and transporting, the committee reported. In other commodity fields the producer and consumer seldom deal directly, middlemen operating to buy the commodity at its source and deliver it to the consumer. In the oil industry, the refiner usually deals directly with the producer.

To change the existing method of doing business would require the introduction of middlemen. The committee found that not less than 70 per cent of the oil produced in the Mid-Continent, Wyoming and California fields is handled direct in the territories where produced. Producer and refiner find it convenient and economical to transact business direct with each other. There has been no necessity for the middleman.

The committee set out that the present tremendous stocks of crude petroleum and refined products in the United States are carried by the entire industry and that only a small portion of the oil is stored by persons who can be called middlemen.

It is inconceivable that enough middlemen could have been created to perform such a gigantic service and to assume the risks thereof.

Eastern Kentucky Refinery Market

ASHLAND, March 12.—March 12 quotations, f.o.b. eastern Kentucky refinery, are:

60-62, 425 e. p. gasoline	9.25
64-66, 375 e. p.	9.375
68-70, 360 e. p.	9.625
41-43 kerosene	6.50
34-36 gas oil	None available
32-34 gas oil	None available

Eastern Kentucky prices for March 5 and Feb. 27, not previously available, are also given below for matters of record:

30132 fuel oil	None available	
28-30 fuel oil	None available	
26-30	3.875	
24-26 fuel oil	3.50	
14-16 fuel oil	3.25	
	March 5	Feb. 27
60-62, 425 e. p. gasoline	9.25	9.125
64-66, 375 e. p. gasoline	9.375	9.375
68-70, 360 e. p. gasoline	9.50	9.50
41-43 kerosene	6.50	6.375
34-36 gas oil	None available	None available
32-34 gas oil	None available	None available
30-32 fuel oil	None available	None available
28-30 fuel oil	4.125	4.125
26-30 fuel oil	3.875	3.875
24-26 fuel oil	3.50	3.50
14-16 fuel oil	3.25	3.25

Gulf Coastal Lubes Active

HOUSTON, March 12.—Shipments against jobbing demands for spring requirements gave further strength during the past week to Gulf Coastal lubricant markets. Prices were unchanged from the advanced levels of a week ago. A better export situation was also reflected in domestic movement.

N. Jersey Gas Tax 40% of Receipts

TRENTON, N. J., March 12.—The 2 cent gasoline tax which went into effect in New Jersey on July 1, 1927, yielded for six months $4,087,985, or 40 per cent of the entire receipts of the state motor vehicle department for all of 1927.

Total receipts of the department were $17,061,526, and gross receipts, exclusive of the gasoline tax, were $12,963,540, an increase of 9.2 per cent over the preceding year.

Sells Business; Seeks Site For New One

UNDERWOOD, N. D. March 12.—The Stewart Oil Co. Falkirk, N. D., which has been owned and operated by L. G. Stewart of Underwood, has sold to the Scholtz Grain Co. The company will be operated as the Scholtz Grain & Oil Co.

Mr. Stewart is at present seeking another location for re-entry into the oil business.

DETROIT, Mich., March 10.—Miss M. Roessner, who has been for two years with the Shriver Oil Co. at Baltimore, Md., is now office manager and auditor of the Pennsylvania Petroleum Corp. at Detroit.

TULSA, March 10.—S. F. Shaw, who has been in Colombia and Peru, where gas lift operations are under way for the International Petroleum Corp., has returned to Tulsa.

Refinery Markets on Wax and Heavy Oil Products

Prices given below are in cents per gallon, F. O. B. refinery, except where $ is shown

(For quick reference to Refinery Prices, get the OIL PRICE HANDBOOK, published annually)

WAX

PENNSYLVANIA	Prices Mar. 12	Prices Mar. 5	Prices Feb. 27
Per Pound, New York			
122-124 white crude scale	3.125– 3.25	3.125– 3.25	3.125– 3.25
124-126 white crude scale	3.25 – 3.375	3.25	3.125– 3.25
**OKLAHOMA			
124-126 White Crude Scale	3.00 – 3.25	2.875– 3.25	3.125– 3.25
CALIFORNIA			
White crude scale, per pound, ton lots	6.00 – 6.50	6.00 – 6.50	6.00 – 6.50

FUEL OIL

PENNSYLVANIA			
36-40 fuel oil	4.875– 5.25	5.00 – 5.25	5.00 – 5.25
30-34 fuel oil	5.00 – 5.25	5.00 – 5.125	4.875– 5.125
28-32 fuel oil	4.75 – 5.25	5.00 – 5.125	4.875– 5.125
OKLAHOMA			
38-40 straw distillate	3.00 – 3.25	3.00 – 3.25	3.00 – 3.375
36-38 straw distillate	3.00	3.00	3.00 – 3.125
32-36 gas oil, straw	†2.50 – 2.625	†2.50 – 2.625	†2.50 – 2.625
32-36 dark gas oil	2.50	2.50	2.50
28-30 fuel oil (in bbls.)	$0.95 – 1.00	$0.95 – 1.00	$0.95 – 1.00
26-28 fuel oil (in bbls.)	$0.90 – 0.925	$0.90 – 0.925	$0.90 – 0.925
24-26 fuel oil (in bbls.)	**$0.85– 0.875	**$0.85	**$0.875
22-26 fuel oil (in bbls.)	**$0.80– 0.825	**$0.825– 0.85	**$0.85– 0.875
18-22 fuel oil (in bbls.)	**$0.80	**$0.80– 0.825	**$0.80– 0.825
16-18 fuel oil (in bbls.)	**$0.775	**$0.75– 0.775	**$0.75– 0.775
14-16 fuel oil (in bbls.)	**$0.775	**$0.75– 0.775	**$0.75– 0.775

Note: Zero cold test low flash gas oils sell for ¼ cent more per gallon. Zero cold test fuel oils sell for 5 to 15 cents more per bbl.

KANSAS *(F. O. B. refinery Kansas destination.)			
38-40 straw distillate	3.50	3.50	3.50
36-38 straw distillate	3.25	3.25	3.25
32-36 gas oil	2.75 – 2.875	2.75 – 2.875	2.75 – 2.875
24-26 fuel oil	*$0.90– 1.00	*$0.90– 1.00	$0.90 – 1.00
18-22 fuel oil	*$0.85	*$0.85	*$0.85
NORTH TEXAS			
38-40 straw distillate	3.00 – 3.25	3.125– 3.25	3.25 – 3.375
32-36 gas oil, cracked	2.375	2.375– 2.50	2.25 – 2.375
32-36 gas oil, uncracked	2.375	2.375– 2.50	2.25 – 2.375
24-26 fuel oil (in bbls.)	$0.775– 0.80	$0.75 – 0.80	$0.725– 0.75

GULF COASTAL	Prices Mar. 12	Prices Mar. 5	Prices Feb. 27
Fuel (in bbls.)	$1.40 –$1.50	$1.40 –$1.50	$1.40 –$1.50
Gas oil	4.375– 4.50	4.375– 4.50	4.375– 4.50
NORTH LOUISIANA (N. La., Ark. and Miss. destination)			
32-36 gas oil, dark	3.00	3.00	3.00 – 3.125
32-36 gas oil, straw	3.125	3.125	3.125– 3.25
16-20 fuel oil (in bbls.)	$1.00	$1.00	$1.00
ARKANSAS (Arkansas destination only)			
32-36 gas oil, straw	3.25 – 3.50	3.25 – 3.50	3.25 – 3.50
32-36 gas oil	3.00	3.00	3.00
28-32 gas oil	2.75	2.75	2.75
CALIFORNIA* (F. O. B. San Joaquin Valley. At San Francisco, 4c per bbl. more)			
14-18 fuel oil (in bbls.)	$0.65 –$0.75	$0.60 –$0.75	$0.60 –$0.75
14-18 Bunker oil (in bbls.)	$0.80 –$1.00	$0.80 –$1.00	$0.80 –$1.00
30-34 gas oil (in bbls.)	$1.05 –$1.10	$1.05 –$1.10	$1.05 –$1.10
27 Plus Diesel oil (in bbls.)	$0.90 –$1.00	$0.90 –$1.00	$0.90 –$1.00

PETROLATUMS

PENNSYLVANIA (In cents per pound in tank cars; in barrels, in car lots ¾c per pound more.)			
Snow White	8.375	8.375	8.875
Lily White	7.375	7.375	7.875
Cream White	6.375	6.375	6.875
Light Amber	3.50	3.50	3.875
Amber	3.25	3.25	3.50
Red	2.75	2.75	3.25
Green No. 5 color	2.25	2.25	2.625

**PETROLEUM COKE

OKLAHOMA (Per ton in car lots)			
Lump	$5	$5	$5
Still run	$3	$3	$3
Breeze	$2	$2	$2

†PRICES NOMINAL ††ONLY ONE REFINER QUOTING *QUOTATIONS ONLY **REPRESENTS BOTH SALES AND QUOTATIONS

California Shut-In Program Strengthens Market

LOS ANGELES, March 10.—Jobbers, refiners and buyers of petroleum products in California late this week were "up in the air". The market is turning for the better, but no one was sure just how strong it was to be. Two major refiners were out of the export gasoline market for several days, waiting to see what would happen. No refiner was begging for business. Jobbers seeking a line on the market were having a hard time. Nominally, all quotations are unchanged.

Rumors were current this week that some export gasoline had been sold above 6 cents. In fact no one would quote U. S. Motor for export at less than 6.25 cents. Some feel that within a month they can sell at even more than 6.25 cents—probably 6.50 cents. The closing in of a number of oil wells in California, effective in the next week or so, is having a direct bearing on the market.

The tank car market is also showing some improvement, although a few cars were moved the past week at 7 cents. Most of the business of the week was at 8 to 8.50 cents, especially within the state.

The local retail gasoline situation is showing no improvement, although the Independent refiners are making a manful effort to get better prices.

There is no change in the fuel oil situation and quotations are holding at old figures. With the shut-in movement underway, it is expected that shipments will show an increase and more contracts are expected to be signed, but until the fuel storage is reduced to some extent, not much improvement can be expected in prices paid. If any contracts were signed this week, they were not reported.

Natural gasoline is strong at 8 to 8.50 cents, with little spot stuff on the market.

Export Lubes are Quiet; Buying Gain Expected

NEW YORK, March 10.—Export lubricating oil markets were quiet this week. Indications were that buying for spring requirements would be under way shortly.

Prices of Mid-Continent and south Texas oils did not change materially. Pennsylvania oils fluctuated both up and down. Brokers reported moving considerable quantities of 600 and 650 fire steam refined late in the week at prices a shade under those of a week ago.

Quotations for 630 flash covered a wide range; a low grade of this oil was offered at 27 cents whereas better quality goods were quoted up to 34 cents.

Wax Markets are Quiet; Scale Cheaper at Gulf

NEW YORK, March 10.—White crude scale was cheaper in the New Orleans market this week. South American buyers were inactive and dealers found placing of occasional distress goods difficult. Some Mid-Continent refiners were in a relatively good position for March and were hesitant about making offers over April.

Small lots of white crude scale sold at 3.25 cents a pound at New Orleans and semi-refined was in one or two cases sold 0.125 cent higher. The refiners that were willing to indicate a price, quoted 3.25 cents as their idea of the April market.

Trading in New York was virtually dead. White crude scale was quoted mostly at 3.25 cents.

Fully refined waxes, particularly those with high melting point, occupied better position than scale. A few sales of 133-135 and 135-137 A.m.p. fully refined wax were reported and today these grades were quoted at 5.50 cents and 6 cents a point, respectively.

Kerosene is Star Performer In Chicago Market

Staff Special
CHICAGO, March 10

ANNOUNCEMENT was made Saturday that the Chicago post office gasoline contract for the second quarter of 1928 had been awarded to the Shaffer Oil & Refining Co., Chicago. Four or five concerns were reported to have bid on this contract, which calls for approximately 225,000 gallons of U. S. Motor gasoline.

The contract was awarded on a basis of the average tank car price on date of shipment as given in the Chicago Journal of Commerce, plus a nominal charge for storage. As in the past, the seller lends the buyer a storage tank from which post office trucks get the goods as needed.

In this manner the post office department in Washington buys in Oklahoma and is able to enjoy a reduced freight rate by taking advantage of government land grant rates allowed on government roads.

Kerosene was the most conspicuous product in the local market this week. While none of the local trade reported any sensational amount of orders, nevertheless demand has picked up considerably over last week and prices were slightly improved. One seller reported better kerosene demand than for some months past, while another said his orders this week amounted to more than for all of February. The 41-43 w.w. kerosene sold mostly at 4.25 cents until Thursday and at 4.25 to 4.375 cents thereafter.

Gasoline movement was good this week. Most of the trade reported that business was good for this season, although roads off the main highways are in bad shape. Prices continued their gradual upward movement and most sellers advanced their prices approximately .125 cent sometime during the week. One refiner announced that effective March 12 his quotations on 58-60 U. S. Motor gasoline would be advanced to 6.50 cents. U. S. Motor was 6.125 to 6.25 cents Monday and moved mostly at 6.25 cents the rest of the week.

Demand for higher gravity gasolines was fairly good with prices generally unchanged over the week. The 60-62, 437 e.p. grade sold mostly at 6.25 to 6.375 cents. Gasoline of 60-62, 400 e.p. continued to move at 6.50 to 6.625 cents, while the 64-66, 375 e.p. grade remained unchanged at 7 cents. Sales were reported both higher and lower than this figure.

Distillate was quiet this week with 38-40 straw selling mostly at 3.125 to 3.375 cents.

Gas oil had a steady demand this week at prices recorded at the close of the previous week. Ordinary 32-36 dark gas oil sold at 2.50 to 2.625 cents. Dark gas oil of 32-36 gravity with a zero cold test moved mostly at 2.875 to 3 cents and the straw zero goods continued to bring 3 to 3.25 cents.

Nearly all of the trade concurred in the opinion that while fuel oils were in slightly lessened demand and more freely offered, prices were still holding at levels maintained for the past few weeks. Fuel oil of 28-30 gravity remained unchanged at $1 to $1.10, and 24-26 and 22-26 fuel oils sold mostly at $0.85 to $0.925. Sales of 18-22 fuel oil were reported at $0.825 to $0.90. Quotations and sales of Smackover treated fuel oil were reported at $0.90 to $0.95.

The weather bureau reports unsettled weather with frequent precipitation will prevail most of next week in Standard of Indiana territory. Temperatures will be normal or slightly above over most of the week.

LOUISVILLE, March 10.—C. C. Stoll, president of the Stoll Oil Refining Co. here, is spending the winter at Miami, Fla. with Mrs. Stoll.

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Week's Price Changes Tank Wagon Markets

Gasoline Changes

Atlantic Refining—T.w. and s.s. prices gasoline advanced 1 cent, Massachusetts and Rhode Island, making t.w. price without tax at Providence, Springfield, Worcester and Boston 18 cents, **March 6.**

Standard of Kentucky—T.w. and s.s. prices gasoline reduced 1 cent, Clarksdale, both to 16 cents, including 4 cent state tax, **March 5.** Prices at this point had been 17 cents since July 18. T.w. price gasoline cut 1 cent, s.s. cut 2 cents, Augusta, to 17 cents and 18 cents respectively, including 4 cent state tax, **March 4.**

T.w. price gasoline cut 1 cent, s.s. price cut 3 cents, Atlanta, to 17 cents and 18 cents respectively, including tax, **March 3.** T.w. and s.s. price gasoline cut 2 cents, Jacksonville, to 15 cents and 16 cents respectively, including 5 cent state tax, **Feb. 28.**

T.w. and s.s. price gasoline cut 2 cents, Tampa, both to 16 cents, including tax, **Feb. 27.** Prices at Tampa had been 18 cents since Dec. 17. T.w. price gasoline cut 4 cents, s.s. cut 3 cents, Macon, to 15 cents and 16 cents respectively, including 4 cent state tax, **Feb. 25.**

Standard of Indiana—T.w. and s.s. prices gasoline advanced 2 cents, Davenport, to 17.5 cents and 19.5 cents, including 3 cent state tax, **March 3.** T.w. and s.s. prices gasoline advanced 3.9 cents, Fargo, to 18.9 and 20.9 cents respectively, including 2 cent state tax, **Feb. 24.**

Magnolia Petroleum—T.w. price gasoline at Muskogee was advanced 3 cents, to 16 cents, including 3 cent state tax, Feb. 27, instead of 1 cent as previously reported.

Gasoline prices at Tulsa were not advanced in the 1 cent general advance in Oklahoma on Feb. 27, but were advanced 1 cent, Feb. 24, to 15 cents t.w. and 16 cents s.s., including tax.

Canada: T.w. and s.s. prices advanced 2 cents, Nova Scotia, covering 2 cent increase in provincial gasoline tax, bringing tax to 5 cents, March 7, on which date prices were also cut 2 cents, leaving prices unchanged. Gasoline prices cut 2 cents, New Brunswick and P.E.I., March 7.

These changes were made on Feb. 25: T.w. and s.s. prices gasoline cut 2 cents, Fort William and Regina; and 3 cents, Winnipeg.

* * *

Kerosene Changes

Canada—T.w. price kerosene cut 2 cents, Nova Scotia, New Brunswick and Prince Edward Island, **March 7.** T.w. price kerosene changed on **Feb. 25** at these points: Fort William and Regina cut 1 cent; Winnipeg cut 2 cents; Calgary, cut 1 cent and Edmonton, advanced 1 cent.

Tank Wagon, Service Station Markets for Gasoline and Kerosene In United States Territories and Canada

(As posted by principal marketing companies)

(OIL PRICE HANDBOOK has t.w. and s.s. markets for whole year arranged for quick reference)

These Prices In Effect March 12, 1928

S.O. NEW JERSEY TERRITORY

	Gasoline T.W.	Tax	Total T.W.	S.S.	Oil T.W.
Atlantic City, N. J.	16	2	18	20	14
Newark, N. J.	16	2	18	20	14
Annapolis, Md.	16	4	20	23	12
Baltimore, Md.	16	4	20	23	10
Cumberland, Md.	16	4	20	23	14
Washington, D. C.	16	2	18	21	12
Danville, Va.	16	4½	20.5	*	14
Norfolk, Va.	16	4½	20.5	23.5	12
Richmond, Va.	14	4½	18.5	21.5	14
Roanoke, Va.	16	4½	20.5	23.5	14
Petersburg, Va.	16	4½	20.5	23.5	14
Charleston, W. Va.	16	4	20	23	14
Keyser, W. Va.	16	4	20	23	14
Parkersburg, W. Va.	14	4	18	21	14
Wheeling, W. Va.	16	4	20	23	14
Charlotte, N. C.	16	4	20	23	14
Hickory, N. C.	16	4	20	20	14
Mt. Airy, N. C.	16	4	20	23	14
Salisbury, N. C.	16	4	20	23	14
Charleston, S. C.	15	5	20	23	14
Columbia, S. C.	15	5	20	23	14

*Dealers set own prices. S. O. New Jersey does not operate station.

Note: Above gasoline and oil prices in N. Carolina include ¼c per gal. inspection fee and in S. Carolina ½c.

S. O. NEW YORK

Due to local price conditions at many points in S. O. New York territory, actual prices on both gasoline and kerosene are being made at under the posted tank wagon prices published below.

New York City	17	0	17	*19	15
Albany, N. Y.	17	0	17	19	15
Buffalo, N. Y.	15	0	15	18	14
†Rochester, N. Y.	15	0	15	18	12
Syracuse, N. Y.	15	0	15	17	15
Boston, Mass.	17	0	17	18	15
Augusta, Me.	17	4	21	23	15
Manchester, N. H.	17	4	21	22	15
Burlington, Vt.	17	3	20	22	15

*The Standard of New York does not operate stations in New York City. This figure is the retail price of a principal station operator selling Socony gasoline.

†It is reported that S. O. New York is selling a second grade of gasoline at Rochester, 3c below the above posted prices which apply on its Socony grade.

ATLANTIC REFINING

Pittsburgh, Pa.	16	*	16	*22	13
Philadelphia, Pa.	15	*	15	*21	13
Allentown, Pa.	16	*	16	*22	13
Erie, Pa.	12	*	12	*18	13
Scranton, Pa.	16	*	16	*22	13
Altoona, Pa.	16	*	16	*22	13
Dover, Del.	16	3	19	22	13
Wilmington, Del.	16	3	19	22	12
Providence, R. I.	18	2	20	20	15
Boston, Mass.	18	0	18	18	15
Springfield, Mass.	18	0	18	18	15
Worcester, Mass.	18	0	18	18	15
Hartford, Conn.	18	2	20	20	14
New Haven, Conn.	18	2	20	20	15

*3-cent state tax is collected by retail dealer and paid by him directly to state.

S. O. KENTUCKY

Lexington, Ky.	13	5	18	21	15.5
Louisville, Ky.	13	5	18	21	15
Covington, Ky.	14	5	19	22	15.5
Clarksdale, Miss.	12	4	16	16	11.5
Gulfport, Miss.	††14.5	4	††18.5	21.5	14
Jackson, Miss.	13	4	17	20	12
Natchez, Miss.	12.5	4	16.5	19.5	14
Vicksburg, Miss.	12.5	4	16.5	19.5	14
Birmingham, Ala.‡	13	4	17	18	14.5
Mobile, Ala.‡	14	4	18	21	14
Montgomery, Ala.*‡	9	4	13	16	15.5
Atlanta, Ga.	13	4	17	18	†16.5
Augusta, Ga.	13	4	17	18	†16.5
Macon, Ga.	11	4	15	16	†16.5
Savannah, Ga.	13	4	17	19	†14.5
Jacksonville, Fla.°	10	5	15	16	13.5
Miami, Fla.°	14	5	19	20	14.5
Tampa, Fla.°	11	5	16	16	13
Pensacola, Fla.°	**14	5	**19	22	13

*Local privilege tax of 1 cent on gasoline and ½ cent on kerosene at Montgomery included.

‡Alabama gasoline prices include 1/40 of 1c inspection fee. Mobile gasoline prices include 1c city tax.

†Georgia kerosene prices include 1c state tax.

°Florida gasoline prices include ½c inspection fee.

**Both tank wagon prices include 1c city tax at Pensacola, which went into effect Oct. 15, 1926.

††Both tank wagon prices at Gulfport include Harrison county privilege tax of 2c.

S. O. INDIANA

	Gasoline T.W.	Tax	Total T.W.	S.S.	Oil T.W.
Chicago, Ill.	14	0	14	16	12
Decatur, Ill.	14.2	0	14.2	16.2	12.1
E. St. Louis, Ill.	13.1	0	13.1	15.35	11.2
Joliet, Ill.	14.4	0	14.4	16.4	12.3
Peoria, Ill.	14.2	0	14.2	16.2	12.1
Quincy, Ill.	14.2	0	14.2	16.2	11.9
Indianapolis, Ind.	14.2	3	17.2	19.2	13.2
Evansville, Ind.	14	3	17	19	13
South Bend, Ind.	14.4	3	17.4	19.4	13.4
Detroit, Mich.	14.8	3	17.8	19.8	13.7
Grand Rapids, Mich.	14.7	3	17.7	19.7	13.6
Saginaw, Mich.	14.9	3	17.9	19.9	13.8
Green Bay, Wis.	14.6	2	16.6	18.6	12.4
Madison, Wis.	14.3	2	16.3	18.3	12.1
Milwaukee, Wis.	14.1	2	16.1	18.1	11.9
La Crosse, Wis.	15.2	2	17.2	19.2	13
Minneapolis, Minn.	14	2	16	18	12.9
Duluth, Minn.	13.5	2	15.5	17.5	12.9
Mankato, Minn.	12.1	2	14.1	16.1	12.7
Des Moines, Ia.	12.9	3	15.9	17.9	12.3
Davenport, Ia.	14.5	3	17.5	19.5	12.3
Sioux City, Ia.	14.1	3	17.1	19.1	11.9
Mason City, Ia.	14.5	3	17.5	19.5	12.3
St. Louis, Mo.	*13.6	2	15.6	17.9	11.3
Kansas City, Mo.	†12.9	2	14.9	16.9	10.6
St. Joseph, Mo.	†12.5	2	14.5	16.5	11.2
Fargo, N. D.	16.9	2	18.9	20.9	14.9
Grand Forks, N. D.	17.2	2	19.2	21.2	15.2
Minot, N. D.	16.9	2	18.9	20.9	14.9
Pierre, S. D.	15.5	4	19.5	21.5	13.9
Huron, S. D.	15.5	4	19.5	21.5	13.9
Wichita, Kans.	12.8	2	14.8	16.8	10.8
Bartlesville, Okla.	12.5	3	15.5	17.5	10.5

S. O. Indiana's quantity discount schedule on tank wagon deliveries of gasoline outside the city of Chicago is 1c for 50 gals. or more at one delivery; 1½c for 6,000 gals. or more a month; 2c for 10,000 gals. or more a month, and 3c for 15,000 gals. or more a month.

In Chicago, above discounts apply, except that minimum required quantity to get the 1c discount is 100 gals., instead of 50 gals. This 1c discount applies on quantities of 100 gals. and over, in addition to regular Q.D.A. discounts applying thru rest of territory, as stated above.

Service station discount is 2c per gal. to consumers of 200 gals. or more a month, or 2400 gals. per year.

Discount on kerosene is 1c on 50 gal. dumps throughout territory.

*Includes city tax of ½c.

†Includes city tax of 1c.

S. O. NEBRASKA

Omaha, Neb.	15.25	2	17.25	17.25	12.25
McCook	12.75	2	14.75	16.75	11.50
Norfolk	14.75	2	16.75	18.75	12.75
North Platte	15.75	2	17.75	18.5	13.50
Scottsbluff	15.25	2	17.25	19.25	13.00

CONTINENTAL OIL

Denver, Colo.	13	3	16	18	14.5
Pueblo, Colo.	13	3	16	18	14.5
Grand Junction, Colo.	17.5	3	20.5	22.5	18
Casper, Wyo.	14	3	17	19	13
Cheyenne, Wyo.	15	3	18	20	14.5
Butte, Mont.	19.5	3	22.5	22.5	19
Helena, Mont.	19.5	3	22.5	24.5	19
Salt Lake City, Utah	16.5	3½	20	21	17
Boise, Ida.	19.5	4	23.5	25.5	19
Twin Falls, Ida.	19.5	4	23.5	25.5	19
Albuquerque, N. M.	16	5	21	24	17

S. O. CALIFORNIA*

Phoenix, Ariz.	19	4	23	27	21.5
Los Angeles, Cal.	13.5	3	16.5	20.5	15.5
Fresno, Cal.	14	3	17	21	16.5
San Francisco, Cal.	14	3	17	21	15.5
Reno, Nev.	18	4	22	26	19
Portland, Ore.	14.5	3	17.5	21.5	16.5
Seattle, Wash.	14.5	2	16.5	20.5	16.5
Spokane, Wash.	18.5	2	20.5	24.5	20.5
Tacoma, Wash.	14.5	2	16.5	20.5	16.5

*On Oct. 1, t.w. price at all points for spot sales, was advanced 1c. Very large portion of deliveries are under contract carrying above prices. New customers signing contracts and selling only one brand of gasoline, are given prices published in above table.

S. O. LOUISIANA

Little Rock, Ark.	11	5	16	16	11
Alexandria, La.	13	2	15	18	†14
Baton Rouge, La.	12	2	14	17	†12.5
Lake Charles, La.	13.5	2	15.5	18.5	†14
New Orleans, La.	13.5	2	*15.5	*18.5	†14
Shreveport, La.	13.5	2	15.5	18.5	†13
Lafayette, La.	13	2	15	18	†13.5
Bristol, Tenn.	16	3	19	22	14
Chattanooga, Tenn.	16.5	3	19.5	22.5	15
Knoxville, Tenn.	16.5	3	19.5	22.5	15
Nashville, Tenn.	15	3	18	21	15
Memphis, Tenn.	14	3	17	18.5	14

*New Orleans gasoline prices include 1c parish tax in addition to 2c state tax, and kerosene prices include 1c state tax and 1c parish tax.

†Kerosene price in Louisiana includes 1c state tax.

S. O. OHIO

	Gasoline T.W.	Tax	Total T.W.	S.S.	Oil T.W
All Ohio points	14	3	17	19	14

MAGNOLIA PETROLEUM

Muskogee, Okla.	13	3	16	17	11
Oklahoma City	11	3	14	15	11
Tulsa, Okla.	12	3	15	16	11
Fort Smith, Ark.*	14	*3	17	18	10
Little Rock, Ark.	14	5	19	20	11
Texarkana, Ark. *	13	*3	16	19	12
Dallas, Tex.	10	3	13	17	11
Fort Worth, Tex.	11	3	14	17	11
Houston, Tex.	10	3	13	17	15
San Antonio, Tex.	11	3	14	17	10
El Paso, Tex.	12	3	15	18	16

*Within City of Texarkana and Fort Smith, the state tax on gasoline is 3c per gal. conforming with the Texas state tax. In these two districts outside of the city the 5c Arkansas tax applies.

V. M. & P. NAPHTHA

(Changes ordinarily occur coincident with gasoline price changes)

	Oleum Spirits	V.M. & P. Naphtha	Cleaner Naphtha
Chicago	14.7	16.2	18
Detroit	16.4	17.9	19.7
Kansas City	†14.9	†16.4	†18.4
Milwaukee	15.4	*18.9	*20.7
Minneapolis	*18.7	*20.2	*22
St. Louis	14.6	16.1	17.9
New York		19	

Note: Above prices on Oleum Spirits and V. M. & P. Naphthas went into effect January 3, 1928.

*Includes 2c state tax.

†Includes 1c city tax.

CANADA

(Per Imperial Gallon, which is 1.2 American Gallons)

ONTARIO

	Gasoline T.W.	Tax	Total T.W.	S.S.	Oil T.W
Toronto	19.5	3	22.5	26	21
Ottawa	19.5	3	22.5	26	21
Cochrane	24.5	3	27.5	36	26
Ft. William	22.5	3	25.5	29	22.5

MANITOBA

Winnipeg	21.5	3	24.5	28	21.5

SASKATCHEWAN

Regina	25.5	0	25.5	30	25.5

ALBERTA

Edmonton	26.5	3	29.5	33	26.5
Calgary	22.5	3	25.5	29	22.5

BRITISH COLUMBIA

Vancouver	21	3	24	28	22

QUEBEC

Montreal	20.5	3	23.5	27	21
Quebec City	22.5	3	25.5	31	23
Three Rivers	22.5	3	25.5	29	23

NEW BRUNSWICK

St. John	22.5	3	25.5	30	22
Moncton	22.5	3	25.5	30	22

NOVA SCOTIA

Halifax	22.5	5	27.5	32	24
Sydney	22.5	5	27.5	32	24

PRINCE EDWARD ISLAND

Charlottetown	22.5	3	25.5	29	22

Note: In districts surrounding these points 1c additional is added to city price.

Many Gasoline Inquiries Reach Gulf Coast Export Market

Staff Special
NEW YORK, March 10

THE continued activity of French buyers and renewal of interest by Independent English oil companies resulted in the most active week of trading Gulf export markets have experienced in many months. Only one cargo sale, consisting of gasoline and kerosene, was disclosed but inquiries for approximately 300,000 barrels of these two commodities were in the market Saturday. There is less pessimism in the market than in many weeks.

Bulk prices for the three major grades of gasoline were advanced 0.125 to 0.25 cent a gallon when Standard Oil Co. of New Jersey advanced its posted price for cased gasoline. Early in the week it would have been possible to buy U. S. Motor, 61-63 390 end point, and 64-66 375 end point gasoline at 7 cents, 8 cents and 8.125 cents, respectively. Today, the three grades were quoted at minimums of 7.125, 8.125, and 8.375 cents, respectively, and from all indications it would have been difficult to get these figures shaded.

One large company, it was reported, has about 1,000,000 barrels of oil scheduled for loading at Gulf ports before April 15 and is out of the market until after that time. The foreign subsidiaries of two other important refiners placed orders for March and April cargoes with Independent sources of supply, obviously because the parent companies were unable to supply their requirements.

Two short sales were regarded as the only disturbing influences in the market this week. It was generally conceded, however, that these sales would have little effect on suppliers' ideas of prices and it was also doubtful if coverings could be arranged. It was reported one company had cabled its Paris representative of its inability to supply the goods at the prices at which they had contracted.

The one cargo reported closed this week consisted of approximately 64,000 barrels of 64-66, 375 end point gasoline, water white and prime white kerosene which sold at 8.25, 6.50 and 5.50 cents, respectively, for early April shipment to France. This sale was made before gasoline prices were revised upward.

The following inquiries were in the market Saturday:

French buyer: 60,000 barrels of 64-66, 375 end point gasoline, water white and prime white kerosene for March 25—April 15 shipment.

French buyer: 50,000 barrels of 64-66, 375 end point gasoline, water white and prime white kerosene for April shipment.

French buyer: 50,000 barrels of U. S. Motor and 64-66, 375 end point gasoline for May shipment.

French buyer: 70,000 barrels of U. S. Motor, 61-63, 390 end point and 64-66, 375 end point gasoline for May-June shipment.

United Kingdom buyer: 50,000 to 65,000 barrels of 61-63, 390 end point gasoline for May shipment.

United Kingdom buyer: Part cargo (8,500 barrels) 64-66, 375 end point gasoline, floating.

United Kingdom buyer: Part cargo (10,000 barrels) of natural gasoline, immediate.

In the instance of the 50,000-barrel cargo of U. S. Motor and 64-66, 375 end point gasoline for May shipment to France, the buyer bid 7 and 8.125 cents, respectively, with no takers and the broker negotiating the deal said he was even having difficulty in securing a counter offer.

Kerosene quotations remained fairly steady. An increasing number of suppliers quoted 6.75 cents and 5.75 cents, respectively for water white and prime white but the bulk of business placed recently has been taken at 0.25 cent less.

The gas oil market was quiet and generally unchanged although both 26 gravity plus and 32 gravity plus goods was available at 3.875 cents.

Grade C bunker oil was offered at $0.90 a barrel. A small bunker contract was closed at $1.05 for delivery over a year in the New Orleans district. Bunkers were approximately 10 cents a barrel higher further west on the Gulf.

Atlantic Gasoline Market Quiet When Snow Sweeps East

Staff Special
NEW YORK, March 10

IN CONTRAST to the active export markets with which the New York oil trade was concerned this week, domestic markets were almost featureless.

Prices for gasoline at shipping points along the seaboard were steady but demand from the jobbing trade was virtually at a standstill because many jobbers had covered their March requirements before prices were advanced, most sellers explained. Others said heavy snows in the east caused the dullness.

Retail markets were admittedly better. Concessions under tank wagon, however, which last week were reported to have been eliminated were merely reduced 2 cents it became known this week. But the trade looked upon the reduction of discounts as a move toward the end of the practice.

Another advance of 1 cent a gallon in tank wagon and service station prices of gasoline by both Atlantic Refining and Standard Oil Co. of New York in New England tended to further stabilize retail markets there.

Spot U. S. Motor gasoline in tank cars was quoted at 8.50 cents by New York harbor refiners all week. California U. S. Motor was available in some quarters at the same price although one or two sellers were asking 8.75 cents for it.

Philadelphia refiners reported occasional sales of regular U. S. Motor at 8.50 cents and all dealers handling the California grade were quoting that price.

At Baltimore, 8.25-cent U. S. Motor was available until Wednesday when the one refiner who was quoting this figure, advanced his price to 8.50 cents. Buying at Baltimore and terminals further south was more active. California gasoline was held by Baltimore sellers at a minimum of 8.75 cents for shipment to points north and west; for shipment to Virginia and points south the quotation was 9 cents, and for Baltimore delivery, 9.25 cents.

Prices at shipping points in New England were generally unchanged although occasional shading of U. S. Motor in the Boston district was reported. Sellers at Boston were quoting 9 to 9.25 cents, f.o.b. shipping point, or a minimum of 10 cents delivered. In the Providence district U. S. Motor was available at 8.75 to 9.25 cents, f.o.b. shipping point, and sellers were quoting a minimum of 10 cents delivered.

Other oils were little changed either in price or demand.

Complete Seaboard Market

(Export markets for whole year given in OIL PRICE HANDBOOK. Each volume carries refinery, tank wagon, crude and export markets—complete for the years 1924-1925-1926-1927)

Eastern Domestic Market

(Prices for tank car lots, f.o.b. refinery or seaboard terminal, represent majority of quotations and sales.)

	Mar. 12	Mar. 5	Feb. 27
U.S. Motor gasoline, New York harbor	8.50	8.50	8.00
U.S. Motor gasoline, Philadelphia	8.50	8.50	8.00 – 8.25
U.S. Motor gasoline, Boston district	9.00 – 9.25	9.00 – 9.25	9.00 – 9.25
U.S. Motor gasoline, Providence district	8.75 – 9.25	8.75 – 9.25	8.75 – 9.25
U.S. Motor gasoline, Baltimore	8.50	8.25 – 8.50	8.00 – 8.25
U.S. Motor gasoline, Norfolk	8.50	8.25 – 8.50	8.25
U.S. Motor gasoline, †Wilmington, N. C.	8.50	8.50	8.25
U.S. Motor gasoline, Charleston	8.25	8.00 – 8.25	8.00
U.S. Motor gasoline, Savannah	7.75 – 8.00	7.75 – 8.00	7.75 – 8.50
U.S. Motor gasoline, Jacksonville	7.75 – 8.00	7.75 – 8.00	7.75
California U.S. Motor gasoline, †New York Harbor	8.50 – 8.75	8.50 – 8.75	8.25
California U.S. Motor gasoline, Baltimore	8.75	8.75	8.50
California U.S. Motor gasoline, Philadelphia	8.50	8.50	8.25
Water white kerosene, New York Harbor	7.00	7.00	7.00
Water white kerosene, Philadelphia	6.75 – 7.00	6.75 – 7.00	6.75 – 7.00
Water white kerosene, Baltimore	7.25 – 7.50	7.25 – 7.50	7.25 – 7.50
28-34 gas oil, New York harbor	4.50 – 4.75	4.50 – 4.75	4.50 – 4.75
28-34 gas oil, Boston district	4.375– 4.75	4.50 – 4.75	4.50 – 4.75
38-42 furnace oil, New York harbor	5.50 – 5.75	5.75	5.75
36-40 furnace oil, Boston district	5.50	5.50 – 5.75	5.25 – 5.75
Grade C bunker oil, New York harbor	$1.35	$1.35	$1.35
Grade C bunker oil, Boston district	$1.35	$1.35	$1.35
Diesel oil, New York harbor	$2.00	$2.00	$2.00

Note: Above prices do not include inspection tax levied in some states.

MEDICINAL OILS

Russian 885-890 s.g., 325-330 vis.	$0.80 – 0.90	$0.80 – 0.90	$0.80 – 0.90
Russian 870-875 s.g., 150-155 vis.	$0.67 – 0.77	$0.67 – 0.77	$0.67 – 0.77
Russian 860-865 s.g., 80-85 vis.	$0.65 – 0.75	$0.65 – 0.75	$0.65 – 0.75

†Only one refiner quoting.

New York Export Market

(Gasoline and kerosene in cases in bulk. Lubricating oils are per gal. in bbls. Cylinder oils are Penna. products.)

	Mar. 12	Mar. 5	Feb. 27
U. S. Motor gasoline	23.90	23.65	23.65
43-45, 150 w.w. kerosene	17.90	17.90	17.90
42-44, 110 s.w. kerosene	16.90	16.90	16.90
CYLINDER OILS			
Bright stock, dark	33.00 –34.50	33.00 –34.50	33.00 –34.50
600 D filtered	30.50 –31.00	31.00	30.00 –31.00
600 Warren E filtered	24.00 –25.00	24.00 –25.00	23.50 –25.00
600 s.r. unfiltered	16.00 –17.00	16.25 –17.00	16.00 –17.00
650 s.r. unfiltered	18.00 –19.50	19.00 –19.50	18.75 –19.50
600 flash s.r.	20.00 –21.00	20.50 –21.00	20.50 –21.00
630 flash, s.r.	32.00 –34.00	33.00 –34.00	33.00 –34.00
RED ENGINE OILS (Vis. 100°)			
300 vis. No. 6½ color	20.00	20.00	20.00
250 vis. No. 6 color	19.00	19.00	19.00
200 vis. No. 6 color	18.50	18.50	18.50
PALE ENGINE OILS (Vis. 100°)			
230 vis. No. 3¼ color	24.00	24.00	24.00
180 vis. No. 3¼ color	20.00	20.00	20.00
100 vis. No. 2¼ color	15.75	15.75	15.75
MOTOR OILS (Vis. 100°)			
600 vis. No. 7 color	35.00	35.00	35.00
500 vis. No. 6½ color	33.00	33.00	33.00
400 vis. No. 7¼ color	31.00	31.00	31.00
300 vis. No. 6 color	30.00	30.00	30.00
200 vis. No. 3¼ color	24.00	24.00	24.00
MEDICINAL OILS			
875-885 s.g.	$0.80	$0.80	$0.80
865-870 s.g.	$0.70	$0.70	$0.70

WAXES (In cents per pound, f.a.s. carload lots)

WHITE CRUDE SCALE (In barrels)

	Mar. 12	Mar. 5	Feb. 27
122-124 A.m.p.	3.20 – 3.25	3.125– 3.25	3.125– 3.25
124-126 A.m.p.	3.20 – 3.25	3.125– 3.25	3.125– 3.25
FULLY REFINED (In burlap bags)			
123-125 A.m.p. Phila.	4.00	4.00	4.00
125-127 A.m.p.	4.00	4.00	4.00
128-130 A.m.p.	4.125– 4.25	4.125– 4.25	4.125– 4.25
130-132 A.m.p.	4.25 – 4.375	4.25 – 4.375	4.25 – 4.375
133-135 A.m.p.	5.50	*5.25 – 5.50	*5.25 – 5.50
135-137 A.m.p.	6.00	*5.50 – 6.00	*5.50 – 6.00
YELLOW CRUDE SCALE			
124-126 A.m.p.	3.00	3.00	3.00

***Prices nominal.**

Gulf Export Market

(Prices are f. o. b. Gulf oil terminals in Texas and Louisiana, shipments of 20,000 bbls. and over unless otherwise noted, representing sellers' opinions, except those prices specified to the contrary.)

GASOLINE	Mar. 12	Mar. 5	Feb. 27
U. S. Motor	*7.125	7.00	7.00
60-62, 400 e.p.	8.00	7.75	7.75
61-63, 390 e.p.	*8.125	8.00	7.875– 8.00
64-66, 375 e.p.	*8.375	†8.125– 8.25	8.125– 8.25
U. S. Motor, cases (cargoes)	$1.60	$1.60	$1.60
64-66, cases (cargoes)	$1.75	$1.75	$1.75

***Sales only.**
†Quotation to inquiries only.

KEROSENE			
44 water white	*6.50	6.50 – 6.75	6.50 – 6.75
41-43 prime white	*5.50	5.50 – 5.75	5.50 – 5.75
Water white, cases (cargoes)	$1.55	$1.55	$1.55
Prime white, cases (cargoes)	$1.45	$1.45	$1.45

***Sales only.**

DOMESTIC GAS & BUNKER OILS			
26-28 translucent gas oil	3.875– 4.00	3.875– 4.00	4.00
30-32 translucent gas oil	3.875– 4.00	4.00	4.00
Grade C bunker oil	$1.05 –$1.15	$1.00 –$1.15	$1.00 –$1.15
Grade C bunker oil, cargoes	$0.90 –$0.95	$0.95	$0.95

MEXICAN CRUDE AND BUNKER OILS (F.O.B. Steamer, Tampico)

Heavy Panuco crude taxes to be paid	$1.05	$1.05	$1.05
Grade C bunker oil, for bunkering purposes, taxes paid	$1.20	$1.20	$1.20

SOUTH TEXAS LUBRICATING OILS (Viscosity at 100° F.; cold test 0)
(Tanker, f.o.b. Houston)

100 vis. No. 2 unfiltered pale	6.00	6.00	5.50 – 6.00
200 vis. No. 3 unfiltered pale	7.50 – 8.00	7.50 – 8.00	7.50 – 8.00
300 vis. No. 3 unfiltered pale	8.875– 9.00	8.875– 9.00	8.875– 9.00
500 vis. No. 3 unfiltered pale	11.00 –11.25	11.00 –11.25	11.00 –11.25
200 vis. No. 5½ red oil	6.875– 7.00	6.875– 7.00	6.875– 7.00
300 vis. No. 5½ red oil	8.00 – 8.125	8.00 – 8.125	8.00 – 8.125
500 vis. No. 6 red oil	9.50 –10.00	9.50 –10.00	9.00 – 9.50

Pacific Export Market

(Quotations are at seaboard, Los Angeles, in cargo lots, cents per gallon, except where otherwise noted.)

	Mar. 12	Mar. 5	Feb. 27
Gasoline, U. S. Motor, 53-55 Gravity	6.125– 6.25	6.125– 6.25	6.125– 6.25
Gasoline, U. S. Motor, blends and special cuts	7.00 – 8.00	7.00 – 8.00	7.00 – 8.00
Gas Oil, 30-34, per barrel	$1.05 –$1.10	$1.05 –$1.10	$1.05 –$1.10
Diesel Oil, 27 plus, per barrel	$0.95 –$1.00	$0.95 –$1.05	$0.95 –$1.05
Bunker oil, 14-18, per barrel	$0.80 –$1.00	$0.80 –$1.00	$0.80 –$1.00
Fuel oil, 14-18, per barrel	$0.67 –$1.00	$0.67 –$1.00	$0.67 –$1.00
Kerosene, 38-40 w.w., 125-150 flash, per gal.	4.50 – 5.00	4.50 – 5.00	4.50 – 5.00
Cased Goods			
Gasoline, U. S. Motor	$1.70 –$1.80	$1.70 –$1.80	$1.70 –$1.80
Kerosene, 38-40 w.w., 125-150 flash	$1.35 –$1.45	$1.35 –$1.45	$1.35 –$1.45

Crude Oil Prices, as Posted by Major

(Crude prices for years 1924-1925-1926-1927 in

EASTERN FIELDS

(Posted by Joseph Seep Purchasing Agency)

Penna. Grade Oil in New York Transit Lines (Allegheny, N. Y. District)	$2.80
Bradford District Oil in National Transit Lines (Bradford District)	2.80
Penna. Grade Oil in National Transit Lines (Other Pennsylvania)	2.65
Penna. Grade Oil in Southwest Penna. Pipe Lines (Other Pennsylvania)	2.65
Penna. Grade Oil in Eureka Pipe Lines (West Virginia)	2.60
Penna. Grade Oil in Buckeye Pipe Lines (Macksburg, O. district)	2.35
Keister Grade in National Transit Lines (Butler Co)	1.10
Cabell Grade in Eureka Pipe Lines (West Virginia)	1.35
Corning Grade in Buckeye Pipe Lines (Ohio)	1.55
Corning, O. heavy grade	1.45
*Somerset Oil in Cumberland Pipe Lines (Kentucky)	1.45
Ragland Grade in Cumberland Pipe Lines (Kentucky)	.95

*Somerset oil run prior to Oct. 1922, takes price of 6 cents lower than above quotations.

(Posted by Stoll Oil Refining Co.)

Oil City, Ky., oil in Stoll lines.....$1.50

CENTRAL STATES FIELDS

Posted by Ohio Oil Co.

Wooster	$1.57	Plymouth	$1.23
Lima	1.55	West Kentucky	1.33
Waterloo	1.20	*Canadian Petro.	1.95
Indiana	1.32	*Oil Springs	2.02
Princeton	1.50	*Posted by Imperial Oil Ltd.	
Illinois	1.50		

OKLAHOMA, KANSAS and NORTH TEXAS

Prices of Prairie Oil & Gas Co.

(In Oklahoma, Kansas, North and East Central Texas)

Effective Feb. 21, 1928

28-28.9	$0.96	41-41.9	$1.43
29-29.9	1.01	42-42.9	1.46
30-30.9	1.06	43-43.9	1.49
31-31.9	1.11	44-44.9	1.52
32-32.9	1.16	45-45.9	1.55
33-33.9	1.19	46-46.9	1.58
34-34.9	1.22	47-47.9	1.61
35-35.9	1.25	48-48.9	1.64
36-36.9	1.28	49-49.9	1.67
37-37.9	1.31	50-50.9	1.70
38-38.9	1.34	51-51.9	1.73
39-39.9	1.37	52 and above	1.76
40-40.9	1.40		

Humble Oil & Refining Co. Prices

(Ranger, North Texas, Mexia, Powell, Richland, Wortham, Lytton Springs, Currie, Moran and Nocona crudes all in Texas.)

Effective Feb. 21, 1928

Below 25	$0.76	26-26.9	$0.86
25-25.9	0.81	27-27.9	0.91

Humble Prices (Cont'd)

28-28.9	$0.96	37-37.9	$1.31
29-29.9	1.01	38-38.9	1.34
30-30.9	1.06	39-39.9	1.37
31-31.9	1.11	40-40.9	1.40
32-32.9	1.16	41-41.9	1.43
33-33.9	1.19	42-42.9	1.46
34-34.9	1.22	43-43.9	1.49
35-35.9	1.25	44 and above	1.52
36-36.9	1.28		

Mirando, Tex.....$1.00

Magnolia Petroleum Co.

(In Oklahoma, Kansas and North and East Central Texas)

Feb. 21, Magnolia posted in above fields and in Panola Co., same schedule as Prairie, except these grades, unchanged from Feb. 16:

Below 30	$0.75
30-30.9	0.90
31-31.9	1.05
Glasscock and Howard Counties	$0.60
Chalkfield (Howard Co.)	$0.80
Iatan district	$0.93
Corsicana heavy	$1.00

Carter Oil Co.

(Oklahoma and Kansas)

Feb. 21, same schedule as Prairie plus these grades:

24-24.9	$0.76	26-26.9	$0.86
25-25.9	0.81	27-27.9	0.91

PANHANDLE, TEXAS

Humble Oil & Refining Co.

Effective Feb. 21, 1928

Hutchinson and Carson Counties:

Below 31	$0.60	38-38.9	$0.88
31-31.9	0.65	39-39.9	0.91
32-32.9	0.70	40-40.9	0.94
33-33.9	0.73	41-41.9	0.97
34-34.9	0.76	42-42.9	1.00
35-35.9	0.79	43-43.9	1.03
36-36.9	0.82	44 and above	1.06
37-37.9	0.85		

Wheeler County:

Below 29	$0.60	37-37.9	$0.95
29-29.9	0.65	38-38.9	0.98
30-30.9	0.70	39-39.9	1.01
31-31.9	0.75	40-40.9	1.04
32-32.9	0.80	41-41.9	1.07
33-33.9	0.83	42-42.9	1.10
34-34.9	0.86	43-43.9	1.13
35-35.9	0.89	44 and above	1.16
36-36.9	0.92		

Gray County:

Below 27	$0.60	36-36.9	$1.02
27-27.9	0.65	37-37.9	1.05
28-28.9	0.70	38-38.9	1.08
29-29.9	0.75	39-39.9	1.11
30-30.9	0.80	40-40.9	1.14
31-31.9	0.85	41-41.9	1.17
32-32.9	0.90	42-42.9	1.20
33-33.9	0.93	43-43.9	1.23
34-34.9	0.96	44 and above	1.26
35-35.9	0.99		

WEST TEXAS

Humble Oil & Refining Co.

Effective Aug. 23

Crane, Upton, Crockett and Pecos Counties...$0.60

NORTH LOUISIANA—ARKANSAS FIELDS

Prices of Standard Oil Co. of Louisiana Caddo, Homer, Haynesville, Bull Bayou, El Dorado, Crichton and De Soto.

Effective Feb. 21, 1928

Below 28	$0.91	40-40.9	$1.40
28-28.9	0.96	41-41.9	1.43
29-29.9	1.01	42-42.9	1.46
30-30.9	1.06	43-43.9	1.49
31-31.9	1.11	44-44.9	1.52
32-32.9	1.16	45-45.9	1.55
33-33.9	1.19	46-46.9	1.58
34-34.9	1.22	47-47.9	1.61
35-35.9	1.25	48-48.9	1.64
36-36.9	1.28	49-49.9	1.67
37-37.9	1.31	50-50.9	1.70
38-38.9	1.34	51-51.9	1.73
39-39.9	1.37	52 and above	1.76

*Smackover, below 24	$0.75
* do 24 and above	.90
Bellevue	1.25
Cotton Valley	.75
**Urania, La	.75
†East El Dorado	1.00

**Posted by Louisiana Oil Refining Corp.

†Posted by Magnolia Petroleum Co.

*Smackover prices posted on Feb. 7 by S. O. La., Gulf, Shreveport-El Dorado Pipe Line, Atlantic Oil Producing Co. and The Texas Co.; on Feb. 8 by Magnolia; on Feb. 6, by La. Oil Refg. Corp.

STEPHENS, ARKANSAS

Louisiana Oil Refining Corp.

Below 28	$0.85	30-30.9	$0.91
28-28.9	0.87	31-31.9	0.93
29-29.9	0.89	32 and above	0.95

GULF COASTAL

Posted by Humble Oil & Refining Co.

Effective March 14, 1927

Grades A	$1.20	29-29.9	$1.25
Grades B:		30-30.9	1.27
Below 25	1.15	31-31.9	1.29
25-25.9	1.17	32-32.9	1.31
26-26.9	1.19	33-33.9	1.33
27-27.9	1.21	34-34.9	1.35
28-28.9	1.23	35 and above	1.37

Fields classified as A and B are Spindletop, Goose Creek, Hull, Liberty, Sour Lake, West Columbia, Orange, Boling and Pierce Junction. All other fields are Grades A only.

Pa. Neutrals are Steady; Bright Stocks Quiet

CLEVELAND, March 12.—Demand and prices of Western Pennsylvania viscous neutrals have been steady. Demand for steam refined stocks has been fair. No large buying of steam refined stocks has been reported in the last week.

Heavy season for bright stocks is still some weeks off. A few bright stock manufacturers are holding for higher prices as they customarily do at this time of year, but several have been trying to move their output at whatever prices they can get.

Movement of filtered stocks has been good. White crude scale wax has been less active but several manufacturers report they are sold up over March.

Gasoline demand has been good, refiners report although last week's cold weather cut demand in New York state, some of the brokers reported.

Kerosene has been spotty. Prices are under those of two weeks ago by 0.125 to 0.25 cent but one refiner today said he had sold his 45 water white at 6.50 and his 46 at 6.75 to 6.875 cents. Several refiners say they will have no more fuel to offer the rest of March. They are quoting 5.25 cents. Quotations under 5 cents were made today by two refiners who are still in spot market.

KANSAS CITY, March 10.—F. L. Miller, formerly of the Miller Production Petroleum Co., is now manager of the Kansas City offices of the Derby Oil Co. He succeeds Bob Cunningham who was called in to Wichita to become assistant to C. A. Keller, general sales manager.

Texas Jobbers to Hold Meeting in April

HOUSTON, March 8.—President James B. Russ of the Texas Independent Oil Men's Association, an organization of jobbers, has called a special meeting to be held at San Antonio, April 18-19. Better merchandising practice will be the theme of the first day's session, according to Mr. Russ.

GULFPORT, Miss., March 10.—W. C. Tolle, owner of the Tolle Lubricating Co., Gulfport, distributor Quaker State motor oil in southern Mississippi, has sold his properties and business to the Superior Oil Co., with headquarters here.

Mr. Tolle is representing the latter company as salesman.

Purchasers, in All Fields (in Effect March 12)

OIL PRICE HANDBOOK published annually)

GULF COASTAL

Prices of The Texas Co.

Effective March 14, 1927

Grades A	$1.20	*Grades B	$1.15
‡Grades B (light crude):			
35-35.9	$1.37	38-38.9	$1.43
36-36.9	1.39	39-39.9	1.45
37-37.9	1.41	40 and above	1.47

*Grades B include all heavy crudes which do not meet tests for Grades A or for Gulf Coast light crude.

‡The Texas Co.'s gravity and price schedule on oil below 35° is same as Humble's postings on Grades B.

ROCKY MOUNTAIN FIELDS

Prices of Ohio Oil Co., and Midwest Refining Co.

(Salt Creek prices effective Feb. 21, 1928)

‡Salt Creek below 29	$0.96
" " 29-29.9	1.01
" " 30-30.9	1.06
" " 31-31.9	1.11
" " 32-32.9	1.16
" " 33-33.9	1.19
" " 34-34.9	1.22
" " 35-35.9	1.25
" " 36-36.9	1.28
" " 37 and above	1.31
Elk Basin	1.33
Grass Creek light	1.33
Big Muddy	$1.25
Lance Creek	1.33
Rock Creek	1.25
Mule Creek	1.30
Rex Lake	1.10
‡Osage	1.33
‡Cat Creek, Mont.	1.33
Sunburst, Mont.	1.50
‡Hogback, N. Mex.	1.38
Artesia, N. Mex.	1.00

‡Posted by Midwest Refining Co. Midwest also buys Grass Creek light and Elk Basin.

The Texas Co. buys Salt Creek and Big Muddy crude.

CALIFORNIA

Standard Oil Co. of California

Santa Maria and Ventura Posted by Union Oil Co.

Gravity	Signal Hill Seal Beach Huntington Beach	Inglewood Torrance	Whittier La Habra	Newhall, McKittrick, Kern River	Olinda-Brea Canon, Richfield	Athens-Rosecrans Dominguez	Montebello	Coyote Hills	Santa Fe Springs	Midway-Sunset Buena Vista & Elk Hills	Lost Hills	Coalinga	Wheeler Ridge	Santa Maria	Ventura
14-14.9	$ .85	$ .85	$ .85	$ .75	$ .85	....	$ .85	$ .85	....	$ .75	$ .75	$ .75	$ .75	$ .85	$ .85
15-15.9	.85	.85	.85	.75	.85	....	.85	.85	....	.75	.75	.75	.75	.85	.85
16-16.9	.85	.85	.85	.75	.85	....	.85	.85	....	.75	.75	.75	.75	.85	.85
17-17.9	.85	.85	.85	.75	.85	....	.85	.85	....	.75	.75	.75	.75	.85	.85
18-18.9	.85	.85	.85	.75	.85	....	.85	.85	....	.75	.75	.75	.75	.85	.85
19-19.9	.85	.85	.85	.75	.85	....	.85	.85	....	.75	.75	.75	.75	.85	.85
20-20.9	.85	.85	.85	....	.85	....	.85	.85	....	.77	.77	.76	.76	.85	.85
21-21.9	.86	.86	.85	....	.86	....	.85	.86	.85	.79	.79	.77	.77	.85	.85
22-22.9	.87	.87	.85	....	.87	....	.85	.87	.85	.81	.81	.78	.78	.85	.85
23-23.9	.88	.88	....	....	.88	....	.85	.88	.85	.83	.83	.79	.79	.85	.85
24-24.9	.89	.89	....	....	.89	$ .89	.85	.89	.85	.85	.85	.80	.80	.85	.85
25-25.9	.90	.90	....	....	.90	.90	.86	.90	.86	.87	.87	.81	.81	.86	.86
26-26.9	.92	.92	....	....	.92	.92	.87	.91	.87	.89	.89	.83	.82	.87	.87
27-27.9	.94	.94	....	....	.94	.94	.88	.92	.88	.91	.91	.85	.83	.88	.88
28-28.9	.96	.96	....	....	.96	.96	.89	.93	.89	.93	.93	.87	....	.89	.89
29-29.9	.98	....	....	....	.98	.98	.90	.94	.91	.96	.96	.89	....	.91	.91
30-30.9	1.00	....	....	....	1.00	1.00	.91	.95	.93	.99	.99	.91	....	.93	.93
31-31.9	1.03	....	....	....	....	1.03	....	....	.95	1.02	1.02	.93	....	....	.95
32-32.9	1.06	....	....	....	....	1.06	....	....	.97	1.05	1.05	.95	....	....	.97
33-33.9	....	....	....	....	....	1.09	....	....	.99	1.08	1.08	.97	....	....	.99
34-34.9	....	....	....	....	....	1.12	....	....	1.01	....	1.11	.99	....	....	1.01
35-35.9	....	....	....	....	....	1.15	....	....	1.03	....	....	1.01	....	....	1.03
36-36.9	....	....	....	....	....	1.18	....	....	1.06	....	....	....	....	....	1.06
37-37.9	....	....	....	....	....	1.21	....	....	1.09	....	....	....	....	....	1.09
38-38.9	....	....	....	....	....	1.24	....	....	1.12	....	....	....	....	....	1.12
39-39.9	....	....	....	....	....	1.27	....	....	1.15	....	....	....	....	....	1.15
40-40.9	....	....	....	....	....	1.30	....	....	....	....	....	....	....	....	....
41-41.9	....	....	....	....	....	1.33	....	....	....	....	....	....	....	....	....
42-42.9	....	....	....	....	....	1.36	....	....	....	....	....	....	....	....	....

*Union Oil Co. also purchases Long Beach Crude and is maintaining the same gravity and price schedule in that field as the Standard maintains in Signal Hill and Huntington Beach fields. The Union also buys and pays the same prices as the Standard in the Rosecrans-Dominguez fields, on gravities ranging from 14 degrees to and including 24.9 degrees and in Santa Fe Springs, on gravities ranging from 20 to and including 23.9 degrees.

REFINERS' and COMPOUNDERS' SUPPLIES

Following are average market prices for materials used by refiners and compounders as effective the date shown.

	Mar. 12	Mar. 5
Refiners' Supplies		
Soda Ash light 58% bags, cwt.	$1.325	$1.325
Silicate of Soda 60 deg. drums, cwt.	$1.65	$1.65
Silicate of Soda 40 deg. tank cars, cwt.	$0.60	$0.60
Silicate of Soda 40 deg. drums, cwt.	$0.65-0.70	$0.80-0.95
Sal Soda wks.	$0.90-1.10	$0.90-1.10
Caustic Soda 75% solid, cwt.	$3.66	$3.66
Chloride of Lime, cwt., wks.	$2.00	$2.00
Sulfuric Acid 60 deg. tank cars, f.o.b. shipping point per ton	$11.00	$11.00
Oleum 20%, fuming sulfuric, tank cars, wks	$18.50	$18.50
Sulfur, flowers of, cwt.	$3.10-4.00	$3.10-4.00
Liquid Chlorine, tank cars, wks, lb.	5.50-5.75	3.50-3.75
Litharge, powdered, casks, cwt.	$8.50	$8.50
Compounders' Supplies		
Vegetable Oils		
Linseed carloads, spot, lb.	9.80	9.80
Tanks, spot	9.00	9.00
Soya Bean, Tanks, coast, lb.	*9.50	9.50
Oleic Acid		
Distilled, tanks, lb.	8.25	9.00
Distilled, bbls, lb.	9.00	9.75
Saponified, tanks, lb.	8.75	9.25
Saponified, bbls, lb.	9.50	10.00
Lard Oils		
Prime Winter Strained, lb.	15.75	15.25
Extra Winter Strained, lb.	12.75	12.75
Extra, lb.	12.25	12.25
Extra No. 1, lb.	11.50	11.75
No. 1, lb.	11.25	11.25
No. 2, lb.	10.75	10.75
Tallow oil, lb.	11.375	11.375
Neatsfoot Oil		
Pure, bbls, lb.	15.75	15.75
Extra, bbls, lb.	11.75	12.00
No. 1, bbls, lb.	11.50	11.50
Cold Pressed, lb.	18.50	18.50
Fish Oils		
Menhaden Oil		
Light Pressed, gal.	60–62	60–62
Light Pressed, tank cars, N. Y. gal.	52	52
White gal.	65–66	65–66
Yellow bleached, gal.	63–64	63–64
Whale, extra winter bleached, gal.	82	82
Naval Stores		
Steam distilled turpentine, N. Y. gal.	56	55
Steam distilled turpentine, Savannah, gal.	51	50
Gum turpentine, N. Y. gal.	59.50	61
Gum turpentine, f.o.b. cars Savannah gal.	55	57
Wood Rosin F, N. Y. bbl.	$8.30	$8.30
Wood Rosin F, Savn'h. bbl.	$7.50	$7.70
Gum Rosin B, N. Y. bbl.	$8.35	$8.45
Gum Rosin B, f.o.b. cars Savannah bbl.	$7.60	$7.75
Rosin oil, pure, gal.	55	55
Rosin oil, compounded, gal.	47	47
Pine Tar		
Kiln burnt, bbl.	*$13.00	*$13.00
Retort bbl.	$16.00	$16.00
Alcohol		
Denatured, Formula 5, in bbls., per gal.	50-54	55-56

*Nominal.

Transactions in Oil Shares on New York Stock Exchange

1927 High	1927 Low	1928 High	1928 Low	Listed Capital	Par Value	Stocks	Div. Rate	Last Paid	Transactions Week Ended Mar. 10 Sales	First	High	Low	Last	Change
37⅛	27⅜	32⅜	27⅛	(sh) 922,075	N.P.	Amerada Corp.	50cQ	Jan. 31, 28	2,100	30⅜	30⅝	29½	30	— ⅛
82½	35⅛	76½	51¼	(sh) 209,180	N.P.	American Republics Corp.	.....	.....	13,20	61⅞	63⅞	61	61¼	— ¼
50¼	35	41¾	37½	$56,000,000	$ 25	Associated Oil	50cQ	Dec. 24, 27	190	38½	40⅞	38	40	+ 1
131⅜	104	109⅞	95¾	50,000,000	100	Atlantic Refining	$1Q	Mar. 15, 28	7,000	102½	109¾	101⅞	107⅝	+ 4⅝
119	115¼	118¼	116	20,000,000	100	do pfd.	$1.75Q	Feb. 1, 28	.....	.....	.....	.....	.....	.....
35½	20¾	26½	22⅛	28,725,675	25	Barndsdall Corp. A	s62½cQ	Feb. 6, 28	16,400	23⅞	24½	23½	24	0
32½	20½	25¾	22	799,775	25	do B	s62½cQ	Feb. 6, 28	200	24¼	24¼	23⅞	23⅞	+ ⅛
32⅞	20	26⅞	24	51,524,150	25	California Petroleum	25cQ	Mar. 1, 28	7,100	25⅞	26½	25¾	26⅜	+ ⅝
96¾	65	93¼	71¼	20,785,400	100	General Asphalt	.....	.....	25,900	77⅜	82⅞	77	81⅝	+ 5⅜
144⅞	107¼	140¼	114	6,792,200	100	do pfd.	$1.25Q	Mar. 1, 28	1,900	122	128	121¾	128	+ 7
175⅝	60⅛	156⅛	127	25,000,000	100	Houston Oil	.....	.....	33,700	132	139¼	130¼	136	+ 4½
32¾	17⅝	28¼	21¾	(sh) 500,000	N.P.	Independent Oil & Gas	25cQ	Jan. 30, 28	7,500	25¾	26¼	25	26	+ ½
12⅛	7⅝	12⅝	9	$3,280,340	$10	Indian Refining	.....	Dec. 15, 20	31,400	13⅛	13⅞	12¾	13	0
12	7¼	10⅝	8½	4,550,110	10	do ctfs.	.....	.....	23,800	13⅛	13½	12¼	12⅝	— ⅜
112	99	110½	101	2,296,400	10	do pfd.	.....	Dec. 15, 21	500	110	*110½	108	108	— 2
37¾	20½	35⅛	27⅜	(sh) 3,992,122	N.P.	Lago Oil & Transport	75cQ	Feb. 1, 28	5,000	31	32½	30	32	+ ⅝
18⅜	10	12¾	9⅜	(sh) 1,136,500	N.P.	Louisiana Oil Refining	.....	.....	6,500	10¼	10½	10⅛	10¼	— ¼
97	85¼	91	80	$4,000,000	$100	do pfd.	$1⅝Q	Feb. 15, 28	.....	.....	.....	.....	.....	.....
22¾	12	18⅛	12½	(sh) 330,000	N.P.	Maracaibo Oil	.....	.....	1,000	15¼	15½	14¾	15⅜	+ ½
58½	31	37½	33	(sh) 2,316,692	N.P.	Marland Oil Co.	.....	Mar. 31, 27	51,800	35⅝	36½	35⅜	35¾	0
320	200	360	280	$45,942,800	$100	Mexican Petroleum	$3Q	Jan. 20, 28	.....	.....	.....	.....	.....	.....
....	....	....	....	12,000,000	100	do pfd.	$2Q	Jan. 20, 28	.....	.....	.....	.....	.....	.....
9¼	3	8⅝	4⅝	(sh) 945,939	N.P.	Mexican Seaboard	.....	Nov. 15, 24	2,900	7⅞	7⅞	7⅛	7⅛	— ¾
39⅜	25½	29½	25⅛	(sh) 1,357,461	N.P.	Mid-Continent Petroleum	.....	Aug. 1, 27	3,800	26⅝	28¼	26½	27¼	+ ¾
105	97	105½	103¼	$6,718,000	$100	do pfd.	$1.75Q	Mar. 1, 28	200	103½	103½	103½	103½	+ ¼
3¾	1⅝	3⅝	2⅜	24,298,850	10	Middle States	.....	July 1, 23	7,500	2¾	2⅞	2⅝	2¾	+ ⅛
2¾	1⅛	2¾	1½	5,501,370	10	do ctfs.	.....	.....	2,300	1¾	2	1⅝	1⅞	+ ⅛
1⅞	1	1⅝	1¼	(sh) 3,500,000	N.P.	Pacific Oil	.....	.....	2,800	1⅜	1⅜	1¼	1¼	— ⅛
65⅞	40¼	46⅜	38¼	$48,807,400	$ 50	Pan American P. & T.	.....	Oct. 20, 27	1,300	43	43	41½	42½	— 1⅜
66⅜	40¼	46¾	37⅜	121,097,900	50	do B	.....	Oct. 20, 27	24,300	43¾	43¾	41¾	42⅜	— ⅞
37⅞	16¾	21	18¼	(sh) 400,000	N.P.	Pan American Western B.	.....	Jan. 30, 27	4,400	19½	20½	19⅜	20	0
18⅞	8	16½	11½	(sh) 198,770	N.P.	Panhandle P. & R.	.....	.....	900	13¼	13⅞	12⅞	12⅞	— ⅛
83	54	81	70	$2,935,200	$100	do pfd.	.....	July 2, 23	200	70	74	70	74	+ 4
60¼	36¼	43½	35¼	(sh) 2,406,796	N.P.	Phillips Petroleum	75cQ	Jan. 3, 28	34,600	39	39⅜	38¼	38⅜	— ⅜
1⅛	½	¾	½	$29,622.925	$ 25	Pierce Oil Corp.	.....	.....	1,400	⅝	⅝	½	⅝	0
24	13½	20½	16¼	15,000,000	100	do pfd.	.....	Feb. 1, 22	.....	.....	.....	.....	.....	.....
5½	2½	4⅝	3½	(sh) 2,500.000	N.P.	Pierce Petroleum	.....	.....	2,200	3¾	3⅞	3¾	3⅞	+ ⅛
33⅞	16⅜	26	16	$37,450,850	$50	Producers & Refiners	.....	Sept. 15, 23	5,100	19½	20½	19	20	+ ½
50	36⅞	45	41	2,845,350	50	do pfd.	.....	May 1, 25	70	43	43	43	43	— ⅛
33½	25	27½	19	75,959,250	25	Pure Oil Co.	12½cQ	Mar. 1, 28	12,200	21⅝	22¼	21⅛	22	+ ⅜
115½	111⅝	112	112	13,000.000	100	do 8% pfd.	$2Q	Jan. 2, 28	200	112	112	112	112	0
28⅝	25⅜	27⅞	24	$29,224,894	$25	Richfield Oil	25cQ	Feb. 1, 28	11,200	24¾	26	24¾	26⅝	+ 1⅝
54½	44¼	48¾	44⅝	(sh) 611.303	13.40	Royal Dutch, N. Y. shares	$1.343	Jan. 28, 28	3,400	45⅞	45⅞	45½	45⅞	+ ⅜
47⅞	41⅜	43¼	40⅝	(sh) 77,590	£2	Shell Transport & T.	97c	Jan. 23, 28	100	42⅞	42⅝	42⅜	42⅝	0
31⅜	24⅝	26⅞	23¼	(sh)10.000.000	N.P.	Shell Union Oil	35cQ	Dec. 31, 27	9,400	25	25⅜	24⅝	25⅜	+ ⅝
26⅜	14¼	24⅜	18⅛	$7,208.080	$ 10	Simms Petroleum	.....	Apr. 1, 27	2,800	21¼	21⅜	20½	21	— ¼
22⅜	15	21¼	17⅜	(sh) 4,501,915	N.P.	Sinclair Consolidated	.....	May 31, 24	204,400	19⅞	22½	19½	21¾	+ 2⅞
104½	97	108	102½	$16,604.600	$100	do pfd.	$2Q	Feb. 15, 28	400	104¼	106	104¼	106	+ 2
37⅜	24⅛	28¼	25	27,396.590	25	Skelly Oil Co.	50cQ	Mar. 15, 28	21,800	26	27	25⅜	25⅝	— ⅜
60¾	50⅜	56⅝	53	(sh)13,016,434	N.P.	S. O. California	62½cQ	Mar. 15, 28	20,700	54¾	56¼	54	55⅞	+ 1⅜
41⅜	35⅛	40¼	37¾	$607,910 525	$ 25	S. O. New Jersey	‡25cQ	Mar. 15, 28	24,100	39½	39¼	38¾	39	0
34⅛	29¾	31⅜	28¼	427,973.275	25	S. O. New York	40cQ	Mar. 15, 28	18,000	30⅜	30⅜	29⅞	30¼	— ⅛
34⅞	30	42¾	31½	(sh) 1.206.073	N.P.	Sun Oil	25cQ	Mar. 15, 28	21,800	40	*42¾	39¾	41¾	+ 2¼
101⅝	99	102	100	$5.000.000	$100	do pfd.	$1.50Q	Mar. 1, 28	100	101½	101½	101½	101½	+ ¼
6½	3⅛	3⅞	2½	(sh) 1,121.368	N.P.	Superior Oil Corp.	.....	Dec. 20, 20	2,600	3¼	3¼	3	3	— ⅛
58	45	55⅜	50	$180.480 550	$ 25	The Texas Corp.	75cQ	Jan. 1, 28	22,900	51⅜	52⅞	51⅜	52⅜	+ ⅜
18⅞	12	17	12½	8,380.340	10	Texas Pacific Coal & Oil	15cQ	Jan. 3, 28	5,200	12⅞	13½	12¾	13¼	+ ½
29⅛	19	22¼	19⅝	(sh) 2,168,410	N.P.	Tide Water Oil Co.	20cQ	Dec. 31, 27	2,300	19¾	21¾	†19⅝	21¾	+ 1⅝
90⅛	85	90¾	87	$20,705.200	$100	do 5½% pfd.	$1.25Q	Feb. 15, 28	300	89	89	89	89	— ¼
19⅛	15¾	17¼	14¾	(sh) 4,796.158	N.P.	Tide Water Associated	.....	Aug. 1, 27	9,400	15½	15¾	15¼	15½	— ¼
90¾	85	87⅝	82⅛	$72.745.900	$100	do pfd.	$1.50Q	Jan. 3, 28	500	82½	83¼	†82⅛	83¼	+ ¼
10⅜	3¾	10⅛	7¼	(sh) 3.742.029	N.P.	Transcontinental Oil	.....	.....	19,700	8⅞	8⅞	8	8¼	— ⅜
56½	39⅝	49¼	42¾	$40,791.225	$ 25	Union Oil of California	50cQ	Feb. 10, 28	38,900	45	*49¼	45	48	+ 3
127½	94	125	119⅜	30,844.000	100	Union Tank Car Co.	$1.25Q	Dec. 1, 27	17,000	120	124	120	124	+ 4
34½	24½	32⅞	26	(sh) 240.380	N.P.	Warner Quinlan	50cQ	Jan. 3, 28	7,900	30½	30¾	28¼	29¼	— 1¼
27½	20	24¼	20⅛	(sh) 490.000	N.P.	White Eagle Oil & Refining	25cQ	Jan. 20, 28	400	21½	22	21½	21½	+ ½

*New High †New Low ‡Also extras s-Stock Total Sales 806,860

Oil Dividends

	Amount	Payable	Stock of Record
Associated Oil q.	50c	Mar. 31	Mar. 19
Canfild Oil q.	82	Apr. 5	Mar. 20
do pfd. q.	$1.75	Apr. 5	Mar. 20
Humble Oil q.	30c	Apr. 1	Mar. 12
do extra	20c	Apr. 1	Mar. 12
International Pet.	25c	Mar. 15	Mar. 8
Lion Oil Ref. q.	50c	Apr. 27	Mar. 30
Mountain Prod. q.	65c	Apr. 2	Mar. 15
Salt Creek Cons. q.	20c	Apr. 2	Mar. 15
S. W. Pa. Pipe lines q.	$1	Apr. 2	Mar. 15
do extra	$9	Apr. 2	Mar. 15
S. O. Kentucky q.	$1	Mar. 31	Mar. 15
Sterling Oil s. a.	5c	Apr. 5	Mar. 26
Tide Water q.	20c	Mar. 31	Mar. 16
Tide Water-Assoc. pfd. q.	$1.50	Apr. 2	Mar. 16

Pittsburgh Stock Exchange

1927 High	1927 Low	1928 High	1928 Low	Par Value	Stocks	Transactions Week Ended March 9 Sales	First	High	Low	Last	Change
9⅞	6⅞	9½	7½	$ 10	Arkansas Nat. Gas.	1,215	7⅞	8⅜	7⅞	8¼	+ ⅜
98⅝	80⅞	94	90¾	100	Columbia Gas.	.....	.....	.....	.....	.....	.....
107⅞	100	108	108	100	do pfd.	.....	.....	.....	.....	.....	.....
15	7½	10	7½	10	Devonian Oil.	60	8	8	7⅝	7⅝	+ ⅛
117½	115	116	115	100	Duquesne Light pfd.	.....	.....	.....	.....	.....	.....
....	....	85	80½	100	Fayette County Gas.	.....	.....	.....	.....	.....	.....
12¼	6	16	12	N.P.	Houston Gulf Gas.	175	12¾	*16	12¾	16	+ 2¾
59¼	37¼	55¾	52½	$ 25	Lone Star Gas.	670	53¼	54	53¼	54	0
3⅞	3	4	3¼	5	Pittsburgh Oil & Gas	530	3¼	3¼	3¼	3¼	0
8	5½	7¼	6⅝	10	Salt Creek Cons.	78	6⅝	6⅝	†6⅝	6⅝	— ⅛
26½	17	20	19	10	Tidal Osage.	.....	.....	.....	.....	.....	.....
43	33	33¼	33	N.P.	Waverly Oil Wks. A	.....	.....	.....	.....	.....	.....

Oil Company Earnings

	1927	1926
California Pet Corp	$1,315,351	$6,608,567
Solar Refining Co.	*478,057	635,347
Humble Oil & Refg. Co.	7,111,738	19,385,572
Sinclair Pipe Line Co.	5,367,989	3,898,221
Midwest Refining Co.	2,166,652	9,310,948
Barnsdall Corp.	4,229,796	6,007,485
Independent Oil & Gas Co.	2,313,432	2,981,929
Lion Oil Ref'g. Co.	450,975	1,181,278
Illinois Pipe Line Co.	3,812,828	2,990,425

*Loss.

Pittsburgh Curb Exchange

1927 High	1927 Low	1928 High	1928 Low	Par Value	Stocks	Transactions Week Ended March 9 Sales	First	High	Low	Last	Change
....	....	....	....	$ 5	Duquesne Oil.	.....	.....	.....	.....	.....	.....
95	88	....	....	25	Gulf Oil.	.....	.....	.....	.....	.....	.....
10¾	5½	5⅞	5½	25	Leonard Oil & Dev.	200	5¾	5⅝	5⅝	5⅝	0
2.70	.30	1.00	.50	10	Omar Oil & Gas.	1,100	.65	.65	.65	.65	— .15
2¼	1¾	....	....	5	Pittsburgh Oil Dev.	.....	.....	.....	.....	.....	.....
31	19	21¼	17½	5	Plymouth Oil.	1,000	19½	19½	19	19¼	— ¼
6	5	....	....	5	States Oil.	.....	.....	.....	.....	.....	.....
3A	1½	3A	2¼	1	Texon Oil & Land.	5,375	2½	3	2½	3	+ ⅜
23¾	18	16	15	10	Tidal Osage Non-vgt.	.....	.....	.....	.....	.....	.....

*New High †New Low xEx Dividend.

Standard Oil Stocks on New York Curb

1927 High	1927 Low	1928 High	1928 Low	Outstanding Capital	Par Value	Stocks	Div. Rate	Last Paid	Transactions Week Ended Mar. 10 Sales	First	High	Low	Last	Change
21⅝	17⅞	22⅜	18¼	£ 4,126.460	£ 1	Anglo-American Oil	60⅓c	May 31, 27	1,900	20¾	21¼	20½	21⅛	+ ¼
21½	17⅝	20½	18⅛	.....	£ 1	do cts. non-voting	.....	.....	900	19⅞	19⅞	19¼	19⅝	— ⅜
3¾	¾	1⅞	1¼	(sh) 500,000	N.P.	Atlantic Lobos	.....	.....	1,200	1⅜	1⅜	1¼	1¼	0
6½	2½	3½	3¼	$ 10,000,000	$ 50	do pfd	.....	.....	.....	.....	.....	.....	.....	.....
69	50	56	50	1,000,000	25	Borne Scrymser	‡$1S.A.	Oct. 15, 27	250	51	51	†50	50¼	— ¾
60	45	63	58	10,000,000	50	Buckeye Pipe Line	$1Q	Mar. 15, 28	1,400	60	67	60	65	+ 5¾
126	76½	149¾	117¼	3,000,000	25	Chesebrough Mfg	$1Q	Dec. 28, 27	100	128	128	128	128	+ 5
22⅜	16¼	22½	16	36,057,840	10	Continental Oil	.....	Dec. 15, 27	9,000	17⅝	17⅞	17⅛	17½	— ⅜
137	89	105	89	3,000,000	100	Cumberland Pipe Line	$2Q	Mar. 15, 28	100	90	90	†89	89	— 1
68½	47	72¾	64½	5,000,000	100	Eureka Pipe Line	$1Q	Feb. 1, 28	250	70	*72¾	70	71	+ 4
13½	3½	6¾	5	16,000,000	100	Galena Signal Oil	.....	June 30, 25	200	6	*6¾	5½	6¾	+ ¼
59¾	23	36	27	4,000,000	100	do new pfd	.....	June 30, 26	320	30	35½	31	35½	+ 5½
60½	35½	45	35	2,000,000	100	do old pfd	.....	June 30, 26	90	36¼	*45	36¼	45	+ 8¼
68½	54	68	60	73,117,577	25	Humble Oil & Refining	‡30cQ	Jan. 1, 28	4,800	63⅞	64¾	62¼	64	0
182	123¾	206	176½	20,000,000	100	Illinois Pipe Line	$6S.A.	Dec. 15, 27	5,600	187¼	*206	186	204	+20¼
64¾	37¾	65¼	56¾	(sh) 6,458,267	N.P.	Imperial of Canada	‡25cQ	Mar. 1, 28	800	59	59¾	59	59¼	+ ¼
94½	61	78¾	74⅞	$5,000,000	$ 50	Indiana Pipe Line	†$1Q	Feb. 15, 28	3,100	76¼	84¾	76¼	83	+ 5⅛
39	28¼	43	35	(sh) 17,123,444	N.P	International Petroleum	25c	Nov. 15, 27	15,800	37⅜	37⅞	36¾	37¾	+ ⅛
24	13¼	28¼	20½	$6,363,350	12.50	National Transit Co	25cQ	Mar. 15, 28	27,600	25¼	*28¼	25¼	27¼	0
44½	31¾	54	37½	5,000,000	100	New York Transit	.....	July 15, 26	900	49	*54	49	54	— 3½
100	70	112½	94	4,000,000	100	Northern Pipe Line	‡$3S.A.	Jan. 1, 28	850	110½	*112½	110	110½	0
67⅞	52	66¾	58	60,000,000	25	Ohio Oil Co	‡50cQ	Mar. 15, 28	2,600	60⅝	61¼	60½	61⅛	+ ½
39	12	43¼	29	10,000,000	25	Penn Mex. Fuel	.....	May 21, 25	4,900	41	*43¼	40½	40½	0
55½	45⅝	50½	47⅝	60,000,000	25	Prairie Oil & Gas	.....	Aug. 31, 27	2,800	49	49⅝	48¾	49¼	+ ¼
190	132	214	184	81,000,000	100	Prairie Pipe Line	$2.50Q	Feb. 1, 28	2,650	201	213	200	210½	+10½
201½	175½	178	175	4,000,000	100	Solar Refining	$5S.A.	Dec. 20, 27	10	177½	177½	177½	177½	+ ½
27¼	15½	33½	21	5,000,000	50	Southern Pipe Line	$2	Dec. 1, 27	1,000	27	30	27	30	+ 4½
41½	35	40⅛	36¾	20,00.000	25	South Penn Oil	50cQ	Dec. 31, 27	600	39	39⅛	38⅝	39⅛	+ ⅛
83	55½	96	70	3,500,000	100	South West Pa. Pipe Lines	‡$1Q	Dec. 31, 27	550	96	102	96	100	+ 3
81½	64⅝	80½	70⅞	228,415,463	25	S. O. Indiana	‡62½cQ	Dec. 15, 27	20,700	74¼	74½	72½	74⅛	+ ⅜
20⅞	14⅜	17½	15	8,000,000	25	S. O. Kansas	.....	June 16, 24	1,100	15⅜	15⅞	15¼	15⅞	+ ⅛
130	111½	132¾	122¼	17,012,559	25	S. O. Kentucky	$1Q	Dec. 31, 27	10,200	125¼	130	124¾	129	+ 3¾
49½	40	43	39⅞	4,559,850	25	S. O. Nebraska	62cQ	Dec. 20, 27	200	41⅜	41⅜	41	41⅛	+ ⅜
87½	72	79	73	14,000,000	25	S. O. Ohio	62½cQ	Jan. 2, 28	550	73	73¾	†73	73¼	+ ¼
122	117¼	120½	117	7,000,000	100	do pfd	$1.75Q	Mar. 1, 28	90	118	118	118	118	+ ¾
21	14½	26	16	30,734,000	25	Swan Finch Co	.....	Nov. 1, 19	.....	.....	.....	.....	.....	.....
149⅞	95⅛	149	136¾	62,470,800	25	Vacuum Oil	‡50cQ	Dec. 20, 27	5,500	142¾	143⅝	141	142⅝	— ⅝

*New high †New low xEx dividend ‡Also extras.

Independent Oils on New York Curb

1927 High	1927 Low	1928 High	1928 Low	Par Value	Stocks	Transactions Week Ended Mar. 10 Sales	First	High	Low	Last	Change
2⅛	.55	1½	.80	$ 5	Amer. Con. Oilfields	28,000	.85	.90	.82	.85	— .3
7½	2¾	4⅞	3⅛	N.P.	Amer. Maracaibo	3,800	4	4⅛	3¾	4⅛	+ ⅛
2¾	1	4	2¼	$ 10	Argo Oil	100	2¼	2¼	2¼	2¼	0
9¾	6¾	9⅞	7¾	10	Arkansas Nat. Gas	700	8	8½	8	8½	+ ¾
20½	15½	.....	.....	N.P.	Beacon Oil	.....	.....	.....	.....	.....	.....
40	20½	39¾	32¾	N.P.	British American	.....	.....	.....	.....	.....	.....
28¼	15½	23⅞	18½	25c	Carib Syndicate(new)	2,100	23	23⅛	22½	22½	— ¼
26	15⅛	.....	.....	.....	do ctfs. of deposit	.....	.....	.....	.....	.....	.....
58¾	40¼	57	54	$ 20	Cities Service	18,000	56⅝	58⅛	56⅝	58	+ 1¼
95⅜	87	99¼	94½	100	do pfd	3,700	97	*99¼	96¾	99¼	+ 2⅛
8⅞	7⅜	9⅜	8⅞	10	do pfd. B	1,700	9⅛	*9⅜	9⅛	9⅜	+ ⅛
29¼	22½	28¼	28¼	10	do banker's shares	400	.....	28⅛	28⅜	28½	+ ¼
3⅞	1⅜	1⅛	1¼	1	Colombia Syndicate	4,100	1½	1½	1¼	1⅛	— ⅛
9¾	6⅜	7¼	6¾	10	Consolidated Royal	.....	.....	.....	.....	.....	.....
14⅛	9½	14⅛	10	N.P.	Creole Syndicate	159,000	13½	14½	13⅜	14½	+ ½
3	.50	1½	.80	N.P.	Crown Central	200	98	98	85	85	—13
12	4	13⅞	8½	N.P.	Darby Petroleum	3,300	13⅞	*13⅞	11½	12	— ⅞
11½	4	13½	7⅞	....	do trust ctfs	700	13½	*13½	12¾	12¾	— 1⅜
2½	.74	1⅜	1	N.P.	Derby Oil & Refining	100	1⅛	1⅛	1⅛	1⅛	— ⅛
16¾	4	.....	.....	N.P.	do pfd	.....	.....	.....	.....	.....	.....
3¾	1	2	1¼	N.P.	Gibson Oil	5,100	1⅜	1⅜	1¼	1⅜	0
2	.40	.53	.51	N.P.	Gilliland ctfs	.....	.....	.....	.....	.....	.....
118	86¼	117¼	101⅜	$ 25	Gulf Oil Corp	3,000	108	108¼	106	107½	+ 1½
2½	.80	2½	1½	10	Intercontinent Pet	17,200	2¼	2⅜	2¼	2⅜	+ ⅛
2¼	1⅛	1⅞	1¼	N.P.	Kirby Petroleum	1,000	1½	1¾	1½	1¾	+ ½
10⅞	5⅛	6¾	5⅜	N.P.	Leonard Oil & Dev.	1,100	5⅜	5½	5¼	5½	0
27½	20	24¾	20	N.P.	Lion Oil & Refg	1,900	23⅛	23⅞	23⅛	23⅞	+ ¾
59⅜	37	55⅞	52	$ 25	Lone Star Gas	500	54	54½	53⅜	54	0
2⅞	.80	1⅜	1⅛	1	Magdalena Synd	3,700	1¼	1¼	1	1	— ¼
21½	20⅞	22¼	22⅛	N.P.	Manhattan Oil	.....	.....	.....	.....	.....	.....
52	12	45	40	N.P.	Margay Oil	.....	.....	.....	.....	.....	.....
3	1⅛	.....	.....	$ 10	Mexican-Panuco	.....	.....	.....	.....	.....	.....
12⅛	5	25	5	N.P.	Mexico-Ohio Oil	2,000	25	*25	23	23	— 3
1½	1	1⅜	1¼	$ 1	Mountain & Gulf	.....	.....	.....	.....	.....	.....
29¼	22¾	28⅝	25⅛	10	Mountain Producers	5,000	26½	27	26¼	26¾	+ ½
5⅛	4⅝	5⅜	4¾	5	New Bradford	200	4⅞	4⅞	4¾	4¾	— ⅛
6¼	4	4⅜	4	10	New England Fuel	200	4¼	4¼	†4	4	— ¼
16	9¼	9⅞	8¼	1	New Mex. & Ariz	400	8¾	9	8½	8⅞	+ ⅜
13⅞	9	14¼	11½	25	New York Oil	400	12⅞	13	12⅞	13	0
12¾	9½	12⅜	10¾	N.P.	North Cent. Texas	400	12⅛	12⅛	12⅛	12⅛	0
23⅞	21¼	.....	.....	....	Okla. Nat. Gas ctfs.	.....	.....	.....	.....	.....	.....
9⅜	3¼	6	3½	N.P.	Pandem	4,400	4	4	†3½	4	0
12⅛	7	10⅞	8½	N.P.	Panapec Oil	1,000	9¼	9¼	8¾	9⅛	— ⅛
9	7⅝	11⅜	10⅝	$ 25	Paragon Refg	.....	.....	.....	.....	.....	.....
.37	.25	9	4	N.P.	Peer Oil Corp	5,000	6	*9	†4	4	0
13½	5⅛	6⅝	5⅛	$ 10	Pennok Oil	800	5½	5½	5⅜	5⅜	+ ¼
.....	.....	4⅛	3⅛	5	Pittsburgh Oil & Gas	.....	.....	.....	.....	.....	.....
24⅜	7	14	9⅛	25	Red Bank Oil	1,900	12⅛	*14	12	14	+ 4⅞
15½	3½	5⅛	4⅛	N.P.	Reiter-Foster	2,400	4⅝	5⅛	4½	5⅛	+ ½
28⅜	15	25½	23¼	$ 25	Richfield Oil pfd	700	24¾	25	24⅝	25	0
7	4½	5⅜	4¾	N.P.	Ryan Consolidated	.....	.....	.....	.....	.....	.....
8	5¼	7¼	6⅝	$ 10	Salt Creek Cons	1,500	6¾	6⅞	6¾	6⅞	+ ⅛
35½	27¼	35	28½	10	Salt Creek Prod	2,900	31¼	32	31⅛	31⅜	+ ⅜
7	1¼	2	1	5	Savoy Oil	.....	.....	.....	.....	.....	.....
26½	17	20	13	10	Tidal Osage	400	17½	17½	16¼	16¼	— 1¼
23¾	15	18	13⅛	10	do non-voting	1,200	15½	15½	15	15¼	— ¼
92	63½	86	82½	100	Transcontinental pfd	400	88	88	86	86	0
23¼	7	29½	18	10	Venezuela-Mexico	1,100	29¼	30¼	29¼	29¼	— ¼
7⅜	4¼	6¼	4⅞	5	Venezuelan Petrol	5,000	5½	5⅜	5⅜	5⅜	+ ⅛
32⅜	19½	22¾	19¼	N.P.	Wilcox Oil & Gas	600	19⅜	20½	†19¼	19¼	— ⅜
8	4⅜	7	5¾	$ 1	Woodley Petroleum	200	5⅜	6	†5⅜	6	0
6	1¾	3	2⅛	25	Y Oil & Gas (new)	300	2⅞	*3	2⅞	3	+ ⅜

*New High †New Low xEx Dividend

Cleveland Stock Market

March 9	Par Value	Bid	Asked	Last Sale
Canfield Oil Co	100	.....	.....	.....
do pfd	100	100	.....	100
Fred G. Clark	10	2⅝	3½	2⅝
National Refining Co	25	35½	40	36
do pfd	100	132½	.....	135
Paragon Refining Co	25	10	10½	10½
do pfd	100	115	120	120

x Ex-Dividend.

MOUNTAIN PRODUCERS CORPORATION

We have available for distribution a descriptive circular regarding this company.

CARL H. PFORZHEIMER & CO.

Specialists in Standard Oil and Miscellaneous Oil Securities

25 Broad Street New York

THE OIL INDUSTRY EXCHANGE

Positions Wanted

CHIEF CLERK now employed 7,000 bbl. mid-continent refinery, desires change account operating curtailment. Stenographer, Accountant, can handle any refinery office position. 29 years old, married, go anywhere. Available at once. Address Box 45.

CHEMICAL ENGINEER well versed in petroleum technology, desires change. Plant and laboratory experience. Capable assuming charge in small refinery as Chief or Assistant Chief Chemist. Would consider position as engineering salesman. Address Box 53.

REFINERY SUPERINTENDENT DESIRES NEW CONNECTION. Ten years experience installation and operation Pipe Stills, Shell Stills, Cracking plant and continuous and batch treatment gasoline and kerosene. References furnished. Address Box 52.

LUBRICATING OIL. Englishman (young) with 12 years selling experience and thorough knowledge of the trade on the Buying, Distributing & Technical side, is open to represent Reliable American concern handling first class products in Barrels & Bulk. Prepared to organize Sales Department or Agency covering British Empire from London or abroad. Reply B. M./G. D. M. N. London, W. C. 1., England.

Situations Open

RESEARCH CHEMIST—Refinery located in East near New York requires services of research chemist experienced in oil industry. Must possess executive ability, vision, and foresight and be capable of guiding operation of fully equipped research laboratory. Give full particulars as to education, special qualifications, age, salary, present employers and references, all of which will be held confidential and returned to applicants who do not qualify. Address Box 48.

EXPERIENCED SALESMAN wanted by long established oil and grease plant for factory trade specializing in lubricating, cutting oils and compounds, soluble oils, greases, etc. Northern Ohio territory and some other rich industrial territory open. Address Box 49.

DRAFTSMEN ON REFINERY EQUIPMENT WANTED

Experienced in structural steel, plate work, concrete and pipe layout. Location, Chicago.

Address Box 50

SALESMEN WANTED

We have some open territory for live salesmen who know the filling station and garage field. State experience, territory you are now covering and what lines you represent. Address Dayton Air Compressor Co., 425 Valley St., Dayton, Ohio.

Miscellaneous

WHAT IT COSTS

"For Sale," "Wanted to Buy," "Help Wanted," "Business Opportunities," "Miscellaneous" classifications, set in type this size without border—10 cents a word. Minimum charge, $3.00.

"Positions Wanted"—5 cents a word. Minimum charge $1.00.

Advertisements set in special type or with border—$4.00 per column inch.

Copy must reach us not later than Friday preceding date of issue.

All advertisements carried on this page are payable in advance.

Professional

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PETROLEUM GEOLOGISTS AND ENGINEERS

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Business Opportunities

WHERE JOBBER AND REFINER MEET

My office is nothing more than a clearing house for Seller and Buyer of Petroleum Products

DALE W. MOORE

532-533 Mayo Bldg., Tulsa, Okla.
Telephones: 3-4177 and 3-4178.
L. D. 136

Equipment Wanted

TWO 48" SECOND-HAND WAX PRESSES. Must be in good condition. In replying advise name of manufacturer, age of presses, price and where they can be inspected. Address Box 51.

For Sale

BULK PLANT AND FILLING STATIONS FOR SALE

Prosperous business located in Michigan, handling high grade petroleum products. This business is making real money. Excellent opportunity. Price $30,000. Require $15,000 cash to make deal.

Write Box 40

TRIBAL OSAGE OIL LEASES AT PUBLIC AUCTION,
MARCH 28 and 29, 1928.
BY UNITED STATES GOVERNMENT.

March 28 and 29, 1928, at Pawhuska, Oklahoma, about 90,000 acres will be offered for oil leases in quarter section tracts. Bids will be for bonus in addition to royalties, 25% payable on day of sale, balance in three annual installments, with acceptable security. Within advertised area there are about 9,875 oil wells producing from one barrel to 2,000 barrels each, the total daily production for December, 1927, being about 58,200 barrels; also there are about 85 wells drilling. All lands are now leased separately for gas. Blue print maps of area advertised, showing tracts producing oil or gas, can be had for fifty cents each, also logs of producing oil or gas wells for twenty-five cents each well. Write U. S. Superintendent, Osage Agency, Pawhuska, Oklahoma for maps, logs or other information.

FILLING STATION FOR SALE

One of finest filling stations in west costing $55,000, in agriculture and college town, wholesale plant and several outside pumps. With little effort business will clear $20,000 per year. Price $75,000. Will carry $25,000 loan. Selling account sickness.

C. S. Buchanan, Greeley, Colorado.

Wackman Welded Ware Co. Completes Drum Plant

ST. LOUIS, March 9.—Completion of the Wackman Welded Ware Co.'s steel drum plant at North Kansas City, has just been announced and it will be in operation by April 1. The building will be 350 by 50 feet on a site approximately 115 by 400 feet.

The desirability of Kansas City as a point of manufacture and distribution to the southwest territory brought about the establishment of the plant at that point. The company believes it can serve its customers more efficiently and economically through this plant, rather than through St. Louis. Another plant is also in operation at Houston, Tex.

R. S. Moulden, who was formerly with the Cleveland Steel Barrel Co., Kansas City, will be in charge of the new Wackman plant. Some four years ago the former company's machinery and equipment were purchased by the Wackman company, which was moved to the St. Louis plant.

L. B. Wackman, head of the company and well known to oil marketers, with the establishment of the new plant, completes a system of more efficient distribution to users in the southwest.

New York Curb Bonds

Week Ending March 9

	High	Low	Last	Ch'ge
Beacon Oil 6s '36	100¾	100¼	100¼	— ½
Cities Serv. 5s '66	93¼	92¾	93⅛	+ ⅜
Cities Serv. 6s '66	103⅛	103	103⅛	0
Cities Serv. G 5⅜s '42	96	94⅞	96	+ ⅞
Cities Serv. G 6s	99⅛	99	99¼	+ ¼
Cont. Oil 5¼s '37	97⅜	97¼	97½	0
Empire O. & R. 5½s '42	93⅝	93⅜	93½	0
Galena Oil 7s '30	92	87	92	+4½
Gulf Oil 5s '37	102⅛	101⅜	102⅛	+ ⅛
Gulf Oil 5s '47	101⅝	101¾	101⅝	0
Independent Oil 6s '39	98⅞	98¼	98½	0
Phillips Pet. 5⅛s '39	93¼	92⅜	93⅛	+ ⅜
Richfield Oil 6s '41	98⅞	98⅛	98⅜	+ ¼
S. O. N. Y. 6⅛s '33	103⅜	103⅛	103⅛	— ¼
Sun Oil 5½s '39	102⅛	101⅜	102	+ ⅜
Trans. Con't. Oil 7s '30	109¾	107¼	108½	+1⅜
Valvoline 7s '37	106	105⅞	106	0
Warner Quinlan 6s '42	99¾	99	99	— ¼

New York Bonds

Week Ending March 9

	High	Low	Last	Ch'ge
Amer. Rep. deb. 6s	102⅞	102⅞	102⅞	0
Assoc. Oil gold 6s	103½	103¼	103½	+ ½
Atlantic Refg. deb. 5s	102¾	101½	102¾	+1⅛
Barnsdall Corp. 6s	100¾	99¾	100⅛	— ⅛
Barnsdall Corp. 6s Ex-war	91⅞	91⅝	91⅞	+ ⅛
Cal. Pet. 5s	100⅜	100	100⅛	— ⅛
Cal. Pet. 5½s	102¼	101¾	102	— ¼
General Asphalt 6s	111	110	111	+1
Humble Oil & Refg. 5½s	102¾	102⅝	102⅝	— ⅛
Humble Oil 5s	100½	100¼	100½	— ⅛
Mid-Cont. Pet. 6½s	105½	104¾	105	— ½
Pan Amer. P & T 7s	105½	105	105	— ½
Pan Amer. P & T 6s	103¼	103⅛	103¼	+ ⅛
Pan Amer. P & T 6s	93½	93	93½	0
Prod. & Refg. 8s	111	111	111	0
Simms Pet. cvt. 6s	103¾	103	103¾	+ ½
Sinclair Con. Oil 7s	100¾	100	100¾	+ ½
Sinclair Con. Oil 6½s	97¾	96¾	97½	— ⅛
Sinclair Con. Oil 6s D	98⅛	97⅜	98⅛	+ ⅛
Sinclair Crude Oil 5½s	98¼	97½	97⅞	+ ⅛
Sinclair Pipeline 5s	95¼	94½	94½	— ⅜
Skelly Oil 5½s	95	94⅜	95	+ ⅝
S. O. N. Y. 4½s	97¼	96⅛	96⅞	0
S. O. N. J. deb. 5s	103¾	103⅜	103½	+ ⅛
Superior Oil 7s	102¼	102¼	102¼	— ⅛
Union Oil of Calif. 6s A	111½	111½	111½	+1¼
Union Oil of Cal. 1st 5s A	102	102	102	0
Union Oil of Cal. 5s C	100¼	100	100¼	+ ⅜
White Eagle 5½s	94⅛	94	94	0

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